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Thirty-fifth
Annual Report

OF THE
COMMISSIONERS OF
WATER WORKS,
IN
THE CITY OF ERIE,
Erie, Penn'a,



To the Councils.

For the year
Ending December 31, 1901.

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35th

ANNUAL REPORT

OF THE

COMMISSIONERS OF

WATER WORKS,

IN THE CITY OF ERIE,

ERIE, PENN'A,

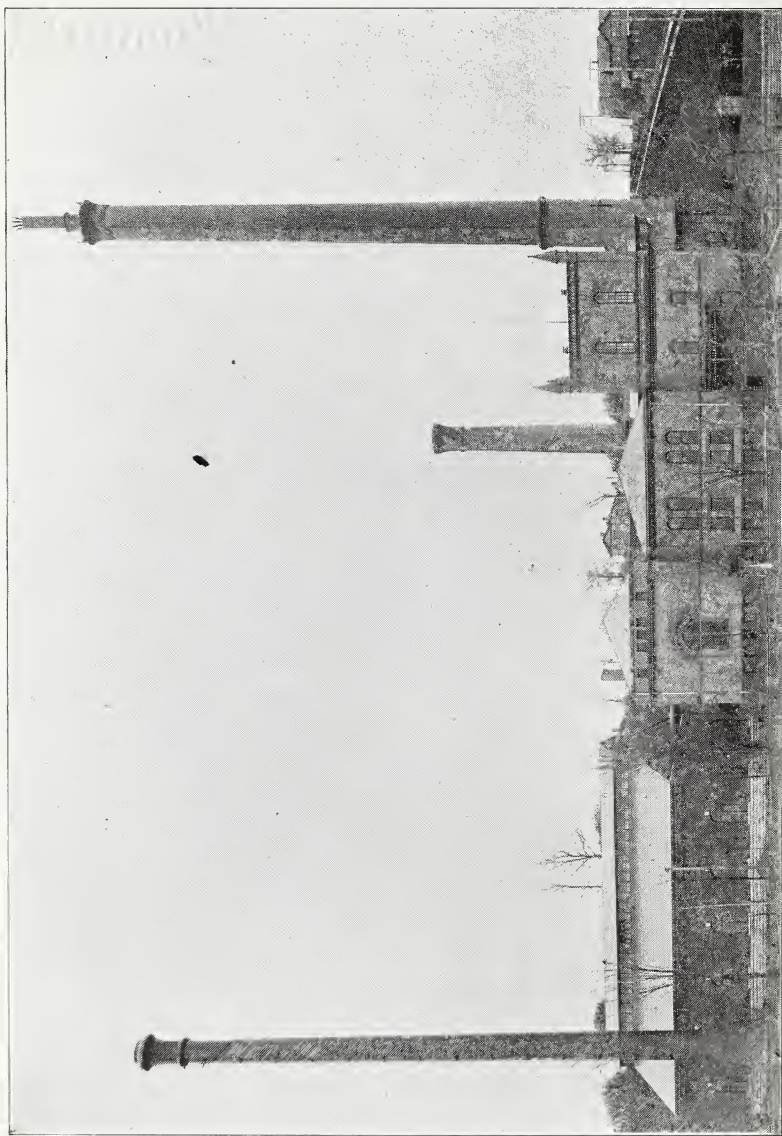
TO THE

COUNCILS,

FOR THE

YEAR ENDING DECEMBER 31, 1901.

ERIE, PA.:
ASHBY PRINTING COMPANY.
1902.



PUMPING STATION AS SEEN FROM THE BAY.

COMMISSIONERS OF WATER WORKS,
IN THE CITY OF ERIE,
ERIE, PENN'A.

CLARK OLDS.

G. F. BREVILLIER.

WILLIS B. DURLIN.

OFFICERS.

CLARK OLDS, A. M. A. S. C. E.

President.

WILLIAM HIMROD, M. A. W. W. A.

Secretary and Treasurer.

GEO. C. GENSHEIMER,

Assistant Secretary.

F. A. ROTH,

Chief Engineer at Pumping Station.

R. T. WALKER,

Superintendent of Street Work.

OFFICE, CITY HALL.

OFFICE HOURS. From 8:00 a. m. to 5 p. m.; on Mondays to 9:00 p. m.

REGULAR MEETINGS OF THE COMMISSIONERS. Every Saturday at 3:00 p. m., and the first of each month at 11:00 a. m., except when it occurs on Sunday, then they meet the following day. Special meetings when necessary.

COMPLIMENTS OF

Wm Hinnelgray & Son

MEMBER AMERICAN WATER WORKS ASSOCIATION.

ANNUAL REPORT.

To the Councils of the City of Erie, Pa.:

GENTLEMEN:

We herewith submit the thirty-fifth annual report of this department, for the year ending December 31, 1901.

RECEIPTS.

Balance in City Treasury Dec. 31, 1900..	\$	380	14
From Water Rents:			
Assessments.....	\$	103,338	32
Meters		29,759	44
Building Permits.....		649	18
Special Permits.....		132	93
		133,879	87
From other sources (Plumbing).....		1,509	70
Total.....	\$	135,769	71

DISBURSEMENTS.

Construction.....	\$	54,404	24
Maintenance		24,580	91
Operating		28,925	27
Accounting.....		9,184	53
Legal.....		115	65
		117,210	60
Sinking Fund Comm's City of Erie.....		2,000	00
Balance in City Treasury Dec. 31, 1901...		16,559	11
Total.....	\$	135,769	71

During the past year we installed at the pumping station a machine shop, consisting of a forge, lathe, drill press, grinder and electric motor, thoroughly rebuilt the Gaskill pumping engine, and laid nearly three and one-half miles of new mains. The total length of water mains is now 110¾ miles.

The increase in the receipts of the department, for the year 1901, amounted to the sum of \$11,681.29.

The amount of water pumped was 3,190,024.916 gallons, an increase over the previous year of 65,584,272 gallons.

The daily average pumpage was 8,739,794 gallons. The daily average per capita pumpage was 165.7 gallons, based upon the census report for 1900, which gives the city a population of 52,733.

We believe a large amount of the water is unnecessarily wasted, which waste could be materially curtailed if the rules of the department were amended so as to permit the installation of meters for domestic use of water.

The high service system, embracing all that portion of the city south of Nineteenth street, has been maintained throughout the year in a satisfactory manner, with an average daily lift of water of 280.88 feet.

The average daily lift of water for the low service system was 236.37 feet.

The accounts of the water department have not been audited for the period of five years, and we reiterate our request that this important duty be performed annually.

We have endeavored to determine how far the electrolytic conditions, which exist here, are threatening the life of the water mains of the city.

Mr. A. A. Knudson of New York, an expert on electrolysis, made a voltmeter survey of the water mains in October, and ascertained that the mains in certain locations have already suffered material damage from electrical currents, that the electrical currents which are producing the disintegration of the iron pipe come from the electric cars, and are sufficient in volume to destroy the entire system of water mains.

The greatest damage seems to have resulted from the improper, careless and negligent manner in which the rails of the Motor Companies are bonded, permitting the return currents to leave the rails and take the water mains back to the power houses. All of the electric car tracks in the city, with the exception of State and West Fourth streets, are electrically in poor condition.

All the large distributing mains from the reservoir are located in West Twenty-sixth street between Chestnut and Cherry streets and are connected with the pumping station through said streets.

The bonds to the rails in Twenty-sixth street are broken, which condition produces an open circuit in the trolley tracks and forms a dam, which prevents the proper return of the current through the rails to the power house, consequently the current

leaves the rails at the reservoir and returns to the power house through the large mains in Chestnut street and through the pumping station.

At the corner of Twenty-sixth and Chestnut streets a difference of potential was found between the rails and the mains amounting to from 80 to 90 volts, and a current of from 15 to 25 amperes was found passing through the mains in Chestnut street to the pumping station. The action of the fraction of an ampere flowing through a cast iron main will in time do great damage to the joints of the pipe.

At the Peach street crossing of the Lake Shore and Michigan Southern Railway the bonds in the rails are broken, and the return current passes eastwardly through the rails of the railroad to the iron bridge over State street and through the foundation of the bridge to the water mains.

On East Twenty-sixth street the voltmeter readings gave a difference of potential between the rails and the mains, ranging from 100 to 147 volts. Similar conditions were found to exist at nearly all of the railway crossings, also in the East Sixth street, East Eleventh street and West Twelfth street lines.

We, therefore, recommend that an ordinance be passed by your Honorable bodies prescribing the manner in which all electric street car lines shall be constructed in the future, and that regular inspections of the electric car lines shall be made by the City Electrician, who shall have power to compel the street car companies to make such repairs to the lines as shall be necessary to prevent the escape of the return current, also that the electric car companies be compelled to place overhead return current wires from the power houses to points in their respective lines where the bonds in the rails are habitually broken.

We again call attention to the necessity for the construction of an intercepting sewer along the city front, a sewer in the valley of Millcreek, and a sewage disposal plant.

For the period of twenty one years this department has annually called the attention of your Honorable bodies to the gradual pollution of the water of the bay by the city sewage. We believe it to be the duty of the city to take care of its sewage, and if this important matter is longer neglected it may seriously affect the health of the city.

Respectfully submitted,

CLARK OLDS,

G. F. BREVILLIER,

WILLIS B. DURLIN,

Commissioners.

Commissioners of Water Works, in the City of Erie, from Organization to December 31, 1901.

The Commissioners of Water Works, in the City of Erie, are appointed by the Court of Common Pleas of Erie County, Penn'a, for a term of three years, one member being named annually. in May.

1867	*W. L. Scott,	*Henry Rawle,	Wm. W. Reed.
1868	*John C. Selden,	*Henry Rawle,	Wm. W. Reed.
1869	*John C. Selden,	*Henry Rawle,	Wm. W. Reed.
1870	*John C. Selden,	*Henry Rawle,	Wm. W. Reed.
1871	*†John C. Selden,	*Henry Rawle,	Wm. W. Reed.
1872	Matthew R. Barr,	John Gensheimer,	Wm. W. Reed.
1873	Matthew R. Barr,	John Gensheimer,	Wm. W. Reed.
1874	Matthew R. Barr,	John Gensheimer,	Wm. W. Reed.
1875	Matthew R. Barr,	John Gensheimer,	Wm. W. Reed.
1876	Matthew R. Barr,	John Gensheimer,	Wm. W. Reed.
1877	Michael Liebel,	John Gensheimer,	Wm. W. Reed.
1878	Michael Liebel,	*J. M. Bryant,	Wm. W. Reed.
1879	Michael Liebel,	*J. M. Bryant,	*G. W. F. Sherwin.
1880	Michael Liebel,	*J. M. Bryant,	*G. W. F. Sherwin.
1881	Michael Liebel,	Benjamin Whitman,	*G. W. F. Sherwin.
1882	Michael Liebel,	Benjamin Whitman,	*G. W. F. Sherwin.
1883	Michael Liebel,	Benjamin Whitman,	*G. W. F. Sherwin.
1884	Michael Liebel,	Benjamin Whitman,	*G. W. F. Sherwin.
1885	Michael Liebel,	Benjamin Whitman,	Geo. W. Starr.
1886	C. Kessler,	Benjamin Whitman,	Geo. W. Starr.
1887	C. Kessler,	C. J. Brown,	Geo. W. Starr.
1888	C. Kessler,	C. J. Brown,	Geo. W. Starr.
1889	C. Kessler,	C. J. Brown,	Geo. W. Starr.
1890	C. Kessler,	C. J. Brown,	Geo. W. Starr.
1891	C. Kessler,	C. J. Brown,	Wm. Hardwick.
1892	T. W. Shacklett,	C. J. Brown,	Wm. Hardwick.
1893	T. W. Shacklett,	C. J. Brown,	Wm. Hardwick.
1894	T. W. Shacklett,	C. J. Brown,	Wm. Hardwick.
1895	T. W. Shacklett,	†C. J. Brown,	Wm. Hardwick.
1896	T. W. Shacklett,	Clark Olds,	Wm. Hardwick.
1897	T. W. Shacklett,	Clark Olds,	Wm. Hardwick.
1898	T. W. Shacklett,	Clark Olds,	Wm. Hardwick.
1899	T. W. Shacklett,	Clark Olds,	Wm. Hardwick.
1900	T. W. Shacklett,	Clark Olds,	G. F. Brevillier.
1901	Willis B. Durlin,	Clark Olds,	G. F. Brevillier.

*Dead.

†Mr. Selden resigned before the expiration of his second term; Mr. Barr was substituted by the other Commissioners, and afterwards appointed by the Court.

†C. J. Brown resigned December 28, 1895, having been elected Treasurer of Erie County, Penna. Clark Olds was chosen by the other Commissioners for the unexpired term, on recommendation of the Court, January 2, 1896.

Officers of Water Works, from Organization to December 31, 1901.

	President.	Secretary and Treasurer.	Assistant Secretary.
1867	Wm. W. Reed,	*Wm. Brewster,	.....
1868	Wm. W. Reed,	*Wm. Brewster,	.....
1869	Wm. W. Reed,	*J. C. Perkins,	.....
1870	Wm. W. Reed,	*J. C. Perkins,	.....
1871	Wm. W. Reed,	*J. C. Perkins,	.....
1872	Wm. W. Reed,	*J. C. Perkins,	.....
1873	Wm. W. Reed,	*J. C. Perkins,	.....
1874	Wm. W. Reed,	*J. C. Perkins,	.....
1875	Wm. W. Reed,	*J. C. Perkins,	.....
1876	Wm. W. Reed,	*J. C. Perkins,	.....
1877	Wm. W. Reed,	*J. C. Perkins,	.....
1878	Wm. W. Reed,	*J. C. Perkins,	.....
1879	Michael Liebel,	B. F. Sloan,	.....
1880	Michael Liebel,	B. F. Sloan,	.....
1881	*G. W. F. Sherwin,	B. F. Sloan,	.....
1882	*G. W. F. Sherwin,	B. F. Sloan,	.....
1883	*G. W. F. Sherwin,	B. F. Sloan,	.....
1884	Benjamin Whitman,	B. F. Sloan,	Geo. C. Gensheimer.
1885	Benjamin Whitman,	B. F. Sloan,	Geo. C. Gensheimer.
1886	Benjamin Whitman,	B. F. Sloan,	Geo. C. Gensheimer.
1887	Geo. W. Starr,	B. F. Sloan,	Geo. C. Gensheimer.
1888	Geo. W. Starr,	B. F. Sloan,	Geo. C. Gensheimer.
1889	Geo. W. Starr,	B. F. Sloan,	Geo. C. Gensheimer.
1890	Geo. W. Starr,	B. F. Sloan,	Geo. C. Gensheimer.
1891	C. J. Brown,	Wm. Himrod,	Geo. C. Gensheimer.
1892	C. J. Brown,	Wm. Himrod,	Geo. C. Gensheimer.
1893	C. J. Brown,	Wm. Himrod,	Geo. C. Gensheimer.
1894	Wm. Hardwick,	Wm. Himrod,	Geo. C. Gensheimer.
1895	Wm. Hardwick,	Wm. Himrod,	Geo. C. Gensheimer.
1896	T. W. Shacklett,	Wm. Himrod,	Geo. C. Gensheimer.
1897	T. W. Shacklett,	Wm. Himrod,	Geo. C. Gensheimer.
1898	T. W. Shacklett,	Wm. Himrod,	Geo. C. Gensheimer.
1899	Clark Olds,	Wm. Himrod,	Geo. C. Gensheimer.
1900	Clark Olds,	Wm. Himrod,	Geo. C. Gensheimer.
1901	Clark Olds,	Wm. Himrod,	Geo. C. Gensheimer.

*Dead.

NOTE.—Mr. Brewster was elected June 14, 1867; resigned October 26, 1868, to take effect November 2, 1868; served 1 year, 4 months and 18 days. Mr. Perkins was elected October 26, 1868, to take effect November 2, 1868; resigned March 30, 1878; same accepted December 21, 1878, to take effect January 1, 1879; served 10 years, 1 month and 29 days. Mr. Sloan was elected December 21, 1878, to take effect January 1, 1879; continued in office to June 1, 1891; served 12 years and 5 months. Mr. Himrod was appointed Secretary May 23, 1891, to take effect June 1, 1891. Mr. Gensheimer was appointed Assistant Secretary January 26, 1884.

**Monthly Receipts from all Sources during the Year Ending
December 31, 1901.**

Month.	Assessment	Meter.	Special.	Plumbing.	Building.	Total.
January	\$23,141 29	\$ 6,465 63	\$ 12 00	\$ 1 00	\$ 18 83	\$ 29,638 75
February	2,062 52	11 81	3 50	374 76	8 18	2,460 77
March	125 34	15 56	.....	33 36	52 82	227 08
April	22,498 72	7,267 42	11 75	30 70	59 11	29,867 70
May	2,673 56	.....	20 50	1 60	52 20	2,747 86
June	466 62	43 88	22 75	656 64	87 44	1,277 33
July	23,884 67	7,442 29	18 95	66 58	43 99	31,456 48
August	1,985 56	22 32	21 12	2 00	30 11	2,061 11
September	441 02	137 37	1 50	5 00	134 15	719 04
October	23,698 62	8,305 98	4 00	13 50	101 74	32,123 84
November	2,226 46	21 17	3 00	214 52	39 75	2,504 90
December	133 94	26 01	13 86	110 04	20 86	304 71
	\$103,338 32	\$29,759 44	\$132 93	\$1,509 70	\$ 649 18	\$135,389 57

**Receipts from each Ward during the Year Ending December
31, 1901.**

Ward.	Assessment	Meter.	Special.	Plumbing.	Building.	Total.
First	\$14,023 93	\$ 3,311 02	\$ 10 00	\$ 295 30	\$ 97 96	\$ 17,738 21
Second	22,017 93	13,760 61	12 89	988 57	119 94	36,899 94
Third	24,457 75	6,336 17	34 28	178 29	120 88	31,127 37
Fourth	19,457 96	1,940 54	34 25	10 00	73 62	21,516 37
Fifth	10,475 34	2,857 20	16 34	75	168 63	13,518 26
Sixth	11,887 83	825 75	6 00	5 94	51 77	12,777 29
Seventh	11,017 58	728 15	19 17	30 85	16 38	1,812 13
	\$103 338 32	\$29,759 44	\$132 93	\$1,509 70	\$ 649 18	\$135,389 57

**Cash Account of Secretary and Treasurer of Commissioners
of Water Works, in the City of Erie, for the Year
Ending December 31, 1901.**

Month.	Receipts.	Deposited with Treasurer City of Erie.	Balance in Of- fice at close of business each month.
January	\$ 29,638 75	\$ 26,451 48	\$ 3,187 27
February	2,460 77	5,572 05	75 99
March	227 08	157 54	145 53
April	29,867 70	26,608 63	3,404 60
May	2,747 86	5,931 17	221 29
June	1,277 33	1,293 28	205 34
July	31,456 48	28,977 71	2,684 11
August	2,061 11	4,674 20	71 02
September	719 04	587 08	202 98
October	32,123 84	29,826 02	2,500 80
November	2,504 90	4,939 71	65 99
December	304 71	370 70	.....
Total	\$135,389 57	\$135,389 57	.....

**Statement of Account with Treasurer of the City of Erie, for
the Year Ending December 31, 1901.**

Month.	Received from Sec'y and Treas. Commissioners of Water Works in the City of Erie.	Paid on War- rants of Com- missioners of Water Works in the City of Erie.	Monthly Balances.
Balance from 1900	\$ 380 14	\$	\$
January	26,451 48	8,766 05	18,065 57
February	5,572 05	4,991 66	18,645 96
March	157 54	7,628 29	11,175 21
April	26,608 63	7,800 29	29,983 55
May	5,931 17	12,709 05	23,205 67
June	1,293 28	10,704 24	13,794 71
July	28,977 71	6,689 01	36,083 41
August	4,674 20	14,127 90	26,629 71
September	587 08	10,050 21	17,166 58
October	29,826 02	8,566 91	38,425 69
November	4,939 71	12,809 13	30,556 27
December	370 70	14,367 86	16,559 11
Total	\$135,769 71	\$119,210 60	\$16,559 11

**Amount Collected Annually for Water Furnished, Showing
Total Collections, also the Increase and Decrease
Each Year Since the Commencement
of the Water Works.**

Year Ending Dec. 31st.	RECEIVED.		ANNUAL.	
	Annually.	Totals.	Increase.	Decrease.
1869.....	\$ 4,264 47	\$.....	¢.....	¢.....
1870.....	9,237 30	13,501 77	4,972 83	.....
1871.....	18,138 08	31,639 85	8,900 78	.....
1872.....	21,652 68	53,292 53	3,514 60	.....
1873.....	25,560 40	78,852 93	3,907 72	.....
1874.....	27,938 90	106,791 83	2,378 50	.....
1875.....	29,639 38	136,431 21	1,700 48	.....
1876.....	31,048 76	167,479 97	1,409 38	.....
1877.....	32,276 57	199,756 54	1,227 81	.....
1878.....	29,636 01	229,392 55	.....	2,640 56
1879.....	33,343 20	262,735 75	3,707 19	.....
1880.....	37,385 00	300,120 75	4,041 80	.....
1881.....	40,385 87	340,506 62	3,600 87	.....
1882.....	43,818 73	384,325 35	3,432 86	.....
1883.....	48,269 89	432,595 24	4,451 16	.....
1884.....	51,852 78	484,448 02	3,582 89	.....
1885.....	53,550 35	537,998 37	1,697 57	.....
1886.....	58,725 00	596,723 37	5,174 65	.....
1887.....	67,121 92	663,845 29	8,396 92	.....
1888.....	73,197 03	737,042 32	6,075 11	.....
1889.....	81,110 68	818,153 00	7,913 65	.....
1890.....	87,279 96	905,432 96	6,169 28	.....
1891.....	93,891 55	999,324 51	6,611 59	.....
1892.....	105,527 03	1,104,851 54	11,635 48	.....
1893.....	111,247 43	1,216,098 97	5,720 40	.....
1894.....	111,821 94	1,327,920 91	574 51*	.....
1895.....	116,927 63	1,444,848 54	5,105 69	.....
1896.....	121,442 94	1,566,291 48	4,515 31	.....
1897.....	124,106 61	1,690,398 69	2,663 67	.....
1898.....	131,303 48	1,821,701 57	7,196 87	.....
1899.....	139,344 02	1,961,054 59	8,040 54	.....
1900.....	122,198 58	2,083,253 17	.....	17,145 44†
1901.....	133,879 87	2,217,133 04	11,681 29	.....

*Meter rates for water changed from a sliding scale of 6 cents to 10 cents per 1,000 gallons, according to amount consumed, to a flat rate of 6 cents per 1,000 gallons, causing a reduction in receipts of \$5,000.00.

†Meter rates changed from six cents per one thousand (1,000) gallons to twenty (20) cents for each one thousand (1,000) gallons for the first Twenty-five Thousand (25,000) gallons, and four (4) cents for each one thousand (1,000) gallons consumed thereafter during each current quarter. Same took effect July 1, 1899. Family rates changed from \$5.00 per annum to \$4.00, taking effect January 1, 1900. These changes in rates account for the heavy decrease in the receipts for 1900.

STATEMENT OF WARRANTS ISSUED IN 1901.

January.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
5	10779	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries	\$	15 64
	10780	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		187 73
12	10781	Erie City Iron Works,		
		Sand.....		1 00
	10782	People's Hack and Livery Co.,		
		Draying		1 25
	10783	Thomson Meter Co.,		
		Meter repairs		1 29
	10784	The Erie Gas Engine Co.,		
		Tools.....		1 50
	10785	Erie Steam Bending Works,		
		Lumber		1 50
	10786	Hollands Manufacturing Co.,		
		Tools.....		1 64
	10787	J. G. Schlindwein,		
		Repairing harness.....		2 40
	10788	A. P. Allen,		
		Hay and straw.....		2 61
	10789	W. E. Hayes & Co.,		
		Lamp, wicks and shears.....		2 60
	10790	Times Publishing Co.,		
		Subscription, one year.....		3 00
	10791	Consumers' Ice and Cold Storage Co.,		
		Ice.....		3 15
	10792	Lyman Felheim,		
		Wooden plugs.....		3 40
	10793	Murphy Bros.,		
		Hardware and tools.....		4 28
	10794	Baas & Althof,		
		Window guards.....		4 75
	10795	The Flickinger Roofing and Cornice Co., Ltd.,		
		Tools.....		4 99
	10796	Chas. Gunnison & Co.,		
		Sole leather.....		5 63
	10797	The Dispatch Publishing Company,		
		Subscription, one year.....		6 00
	10798	The New York and Penna. Tel. and Tel. Co.,		
		Rental of telephone		6 00
	10799	Wm. F. Nick & Son,		
		Paint and oil.....		6 74
	10800	Erie Window Glass Co.,		
		Paint, oil, glass and putty		7 51
	10801	Brown & Thomas,		
		Iron rail.....		9 00
	10802	United States Cast Iron Pipe and Foundry Co.,		
		Iron pipe.....		9 42
	10803	C. Kessler,		
		Brooms, mops, soap, etc.....		10 15
	10804	Mehl & Sapper,		
		Hardware and tools.....		10 46

January—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
10805		Deming Bros.,		
		Meter boxes.....	\$	10 50
10806		Franklin Coal Co.,		
		Coal and wood.....		10 50
10807		Edison Construction & Supply Department,		
		Repairs for electric light plant.....		12 72
10808		Erie Company,		
		Coke.....		12 87
10809		Central Blacksmith Works,		
		Horse shoeing.....		15 20
10810		A. S. Pinney,		
		Hardware and tools.....		18 38
10811		Erie Engine Works,		
		Patterns and engine repairs.....		19 19
10812		The Constable Bros. Co.,		
		Labor and material on buildings.....		20 01
10813		The Holly Manufacturing Co.,		
		Rubbers for Troy valves.....		20 15
10814		William Schade,		
		Blacksmith work.....		21 80
10815		G. J. Gebhardt,		
		Coal and wood.....		21 90
10816		Standard Brick Works,		
		Brick.....		22 80
10817		R. T. Walker,		
		Rent of barn, 6 months.....		30 00
10818		Wm. Densmore & Co.,		
		Oats.....		32 00
10819		Mayer Brothers,		
		Repairing cuts in pavements.....		32 24
10820		Union Iron Works,		
		Work on coal elevator and boiler repairs.....		33 65
10821		Mutual Telephone Company,		
		Telephone rental.....		36 00
10822		H. C. Dunn, Mgr.,		
		Brick.....		42 25
10823		Henry R. Worthington,		
		Engine repairs.....		44 15
10824		E. J. Riblet,		
		Shop rent and chairs.....		45 00
10825		Union Ice Co.,		
		Ice.....		45 55
10826		O. C. Thayer & Son,		
		Cement and fire clay.....		55 75
10827		Keystone Brass Co.,		
		Stair railing, etc.....		59 12
10828		Jarecki Manufacturing Co.,		
		Fittings and pipe.....		60 99
10829		Ashby & Vincent,		
		Stationery and printing.....		66 90
10830		James L. Firman,		
		Teaming.....		74 61
10831		South Erie Iron Works,		
		Castings.....		80 96
10832		Hays Manufacturing Co.,		
		Fittings, curb cocks and boxes.....		116 09
10833		W. P. Mason,		
		Analyses of water for 1900.....		120 00

January—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
10834	Erie Oil Company,		
	Oil	\$	120 89
10835	Erie Machine Shop,		
	Boiler and engine repairs and tools		130 23
10836	Union Oil Works,		
	Oil		133 92
10837	Keystone Electric Co.,		
	Electric motor and repairs to electric light plant		388 95
10838	Erie Mfg. & Supply Co.,		
	Packing, tools, waste, etc.		407 58
10839	The Jeffrey Manufacturing Co.,		
	Coal elevator and conveyor		638 40
10840	R. D. Wood & Co.,		
	Fire hydrants and stop valves		1,087 00
10841	Momeyer & Graf, use The W. L. Scott Company,		
	Coal		1,298 94
10842	Board of Commissioners of the Sinking Fund of the City of Erie,		
	City of Erie, Board of Commissioners of the Sink- ing Fund		2,000 00
10843	Lovell Manufacturing Co., Ltd.,		
	Maintenance of fire hydrants		26 00
10844	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries		25 57
10845	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, clerk		134 69
10846	Kirschner Brothers,		
	Work on coal elevator and conveyor		240 00
19 10847	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries		14 06
10848	Isador Sobel, Postmaster,		
	Postal cards		155 25
10849	National Lead Company,		
	Pig lead		168 64
10850	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, clerk		165 62
26 10851	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, clerk		130 39
Total			\$ 8,766 05

February.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	10852	Pay Roll, Office and Inspectors, Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	\$	941 66
	10853	Pay Roll, Pumping Station, Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		935 00
2	10854	Pay Roll, Street Work, Disbursed by M. L. Whitley, Clerk.....		151 89
	10855	Geo. C. Gensheimer, Ass't Sec'y, Sundries		12 88
9	10856	Erie Oil Company, Oil.....		1 00
	10857	Dickson & Smith, Repairing lock.....		1 00
	10858	Consumers' Ice & Cold Storage Co., Ice.....		1 40
	10859	Erie Heating & Plumbing Company, Repairing water closet.....		1 50
	10860	Reno Manufacturing Co., Neck yoke.....		1 50
	10861	O. C. Thayer & Son, Cement and fire clay.....		1 60
	10862	U. D. Sweigard, Copper pans.....		1 80
	10863	Erie Steam Bending Works, Lumber		2 00
	10864	Erie Window Glass Co., Paint		2 25
	10865	Holland's Manufacturing Co., Tools.....		2 38
	10866	Lyman Felheim, Lumber		2 75
	10867	The Dispatch Publishing Company, Advertising		3 00
	10868	Herald Printing & Publishing Co., Advertising and stationery		3 20
	10869	Murphy Bros., Hardware and tools.....		3 83
	10870	T. S. Buck, Rubber stamps.....		4 00
	10871	Times Publishing Company, Advertising		4 40
	10872	A. S. Pinney, Hardware and tools.....		4 48
	10873	Wm. F. Nick & Son, Oil, paint and varnish.....		4 73
	10874	S. S. Burton, Coal		5 25
	10875	F. A. Douglas, Alarm bells, etc.....		5 95
	10876	The New York & Penna. Telephone & Telegraph Co., Rental of telephone.....		6 00
	10877	Central Blacksmith Works, Horse shoeing and tools.....		8 30
	10878	David Schlosser & Sons, Lumber		11 36
	10879	G. J. Gebhardt, Coal		12 50
	10880	Mehl & Sapper, Hardware and tools.....		15 02

February—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	10881	Wm. Densmore & Co.,		
		Oats.....	\$	17 00
	10882	Keystone Electric Company,		
		Repairs to electric light plant.....		17 88
	10883	Edison Construction and Supply Department,		
		Carbons and repairs to electric light plant.....		19 15
	10884	E. J. Riblet,		
		Shop Rent.....		20 00
	10885	Erie Machine Shop,		
		Engine repairs.....		33 70
	10886	The Hinrod Engraving Company,		
		Stationery.....		37 35
	10887	Jarecki Manufacturing Co.,		
		Fittings and pipe.....		39 76
	10888	Erie Engine Works,		
		Castings, patterns, etc.....		89 69
	10889	Erie Mfg. & Supply Co.,		
		Valves, packing, waste, etc.....		127 64
	10890	National Lead Company,		
		Wiping solder.....		135 68
	10891	Globe Iron Foundry Co.,		
		Castings.....		167 01
	10892	Union Oil Works,		
		Oil.....		167 59
	10893	Library Bureau,		
		Stationery.....		195 25
	10894	Hays Manufacturing Co.,		
		Fittings.....		209 17
	10895	Henry R. Worthington,		
		Engine repairs.....		219 47
	10896	Momeyer & Graf, use The W. L. Scott Company,		
		Coal.....		630 35
	10897	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, clerk.....		112 69
16	10898	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, clerk.....		108 89
	10899	Hays Manufacturing Company,		
		Pipe.....		235 66
23	10900	Thomas A. Walton,		
		On account on contract.....		75 00
	10901	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, clerk.....		128 14
	10902	John Kolb, bookkeeper,		
		Sundry small items.....		41 96
Total				\$ 4,991 66

March.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	10903	T. W. Shacklett,	Services as Commissioner, 2 months.....	\$ 150 00
	10904	Clark Olds,	Services as Commissioner, 2 months.....	150 00
	10905	G. F. Brevillier,	Services as Commissioner, 2 months.....	150 00
	10906	Pay Roll, Pumping Station,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y.	935 00
	10907	Pay Roll, Office and Inspectors,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y.	941 66
2	10908	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	176 64
9	10909	Erie Heating & Plumbing Company,	Plumbing material.....	1 00
	10910	Consumers' Ice & Cold Storage Co.,	Ice.....	1 40
	10911	J. G. Schlindwein,	Repairing harness.....	1 85
	10912	O. C. Thayer & Son,	Fire clay.....	2 00
	10913	Wm. F. Nick & Son,	Oil and paint.....	2 60
	10914	South Erie Iron Works,	Fire pot.....	2 90
	10915	Held, Gorenflo & Co.,	Advertising.....	4 00
	10916	Murphy Bros.,	Pails.....	4 00
	10917	American Arithmometer Company,	Ruled paper.....	4 75
	10918	Fred Nick,	Oil and paint.....	5 25
	10919	A. S. Pinney,	Hardware and tools.....	5 86
	10920	Mehl & Sapper,	Hardware and tools.....	8 14
	10921	Henry Althof,	Wire window guards.....	10 50
	10922	C. Kessler,	Brooms, soap, tallow, etc.....	11 05
	10923	Jarecki Manufacturing Co.,	Fittings.....	23 83
	10924	T. S. Buck,	Rubber stamps.....	24 73
	10925	Erie Machine Shop,	Engine repairs.....	31 84
	10926	American Oil Works,	Boiler compound.....	34 41
	10927	Mutual Telephone Company,	Telephone rental.....	36 00
	10928	Ashby & Vincent,	Stationery, books and printing.....	49 55
	10929	Wm. Schade,	Blacksmith work.....	66 63
	10930	Herald Printing & Publishing Co.,	Stationery and printing.....	88 50
	10931	Erie Oil Company,	Oil.....	93 01

March—Continued.

TO PAY VOUCHER.

Date, No.	Of	For	Amount.
10932	Hays Manufacturing Co.,		
	Fittings.....	\$	93 77
10933	Erie Mfg. & Supply Co.,		
	Oil, packing, tools, etc.....		122 38
10934	Henry R. Worthington,		
	Jacket, tank and pump.....		125 00
10935	Carnegie Steel Company,		
	Structural steel.....		128 97
10936	Constable Bros.,		
	Labor and material on buildings.....		168 57
10937	R. D. Wood & Co.,		
	Gate valves and valve stems.....		515 40
10938	Momeyer & Graf, use The W. L. Scott Company,		
	Coal.....		792 14
10939	George C. Gensheimer, Ass't Sec'y,		
	Sundries.....		16 21
10940	William Roy,		
	Painting.....		24 38
10941	Charles Bengal,		
	Painting engine No. 4.....		95 00
10942	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk.....		128 19
16 10943	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries.....		39 25
10944	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk.....		138 14
23 10945	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries.....		6 18
10946	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk.....		165 87
30 10947	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries.....		8 09
10948	The Henesey Mfg. Co.,		
	Leather washers.....		9 80
10949	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk.....		157 19
10950	Pay Roll, Pumping Station,		
	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		935 00
10951	Pay Roll, Office and Inspectors,		
	Disbursed by Geo. C. Gensheimer, A-s't Sec'y..		941 66
Total.....			\$7,628 29

April.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
3	10952	S. A. Davenport,		
		Counsel fees.....	\$	100 00
6	10953	Thos. A. Walton,		
		Repairing piers and dock.....		100 00
	10954	William Roy,		
		Painting Engine House No. 3.....		6 25
	10955	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		58 98
	10956	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		280 60
	10957	John Wahl Commission Company,		
		Pig lead.....		1,275 54
13	10958	Erie Window Glass Co.,		
		Paints, etc.....		1 00
	10959	Jarecki Manufacturing Co.,		
		Fittings.....		1 25
	10960	F. A. Douglas,		
		Repairing electric bell.....		1 35
	10961	Consumers' Ice & Cold Storage Co.,		
		Ice.....		1 75
	10962	Plumbers' Trade Journal,		
		Annual subscription.....		2 00
	10963	C. Flickinger,		
		Repairing tools.....		2 52
	10964	Ashby & Vincent,		
		Stationery.....		3 25
	10965	Lyman Felheim,		
		Lumber.....		3 61
	10966	Union Iron Works,		
		Material and labor.....		3 75
	10967	C. Kessler,		
		Brooms, wicks and candles.....		4 90
	10968	New York & Penn'a Telephone & Telegraph Co.,		
		Telephones.....		6 00
	10969	A. S. Pinney,		
		Hardware.....		7 42
	10970	O. C. Thayer & Son,		
		Fire clay and fire brick.....		8 00
	10971	Helios-Upton Co.,		
		Thermometers.....		10 50
	10972	Central Blacksmith Works,		
		Blacksmithing.....		10 80
	10973	Mehl & Sapper,		
		Hardware.....		10 81
	10974	G. J. Gebhardt,		
		Fuel.....		12 25
	10975	Keystone Electric Company,		
		Arc light globes.....		15 00
	10976	Wm. Densmore & Company,		
		Oats.....		17 00
	10977	The Constable Bros. Company,		
		Lumber and labor.....		19 56
	10978	E. J. Riblet,		
		Rent of shop.....		20 00
	10979	The Standard Pharmacy,		
		Paints and oils.....		20 56
	10980	John Hamberger,		
		Insurance.....		25 00

April—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	10981	Edison Construction & Supply Department,		
		• Electric light fixtures, etc.....	\$	25 07
	10982	Herald Printing & Publishing Co.,		
		Stationery and printing.....		31 20
	10983	American Oil Works,		
		Boiler compound.....		33 36
	10984	Erie Machine Shop,		
		Machine work.....		47 59
	10985	Henry R. Worthington,		
		Special Jenkins valves.....		49 00
	10986	National Lead Company,		
		Wiping solder.....		66 41
	10987	Carnegie Steel Company,		
		Structural steel.....		70 86
	10988	Union Oil Works,		
		Oil.....		102 42
	10989	R. D. Wood & Co.,		
		Stop valves.....		106 00
	10990	Globe Iron Foundry Co.,		
		Castings.....		114 37
	10991	Hays Manufacturing Co.,		
		Pipe, fittings, etc.....		122 44
	10992	Erie Mfg. & Supply Co.,		
		Oil, packing, tools, etc.....		142 65
	10993	Library Bureau,		
		Desks and stationery.....		211 65
	10994	Momeyer & Graf, use The W. L. Scott Co.,		
		Fuel.....		461 39
	10995	F. E. Reed Company,		
		Machinery lathe.....		690 00
	10996	United States Cast Iron Pipe & Foundry Co.,		
		Pipe and specials.....		701 96
	10997	Municipal Journal and Engineer,		
		Annual subscription.....		3 00
	10998	The Lake Shore & Michigan Southern Ry. Co.,		
		Freight on pipe and specials.....		85 50
	10999	Thomas A. Walton,		
		Repairing piers and dock.....		100 00
	11000	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		26 63
	11001	David Schlosser & Sons,		
		Lumber.....		19 17
	11002	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		433 04
20	11003	Thomas A. Walton,		
		Repairing piers and dock.....		100 00
	11004	T. S. Buck,		
		Rubber stamps.....		6 75
	11005	The Lake Shore & Michigan Southern Ry. Co.,		
		Freight on pipe.....		65 95
	11006	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		71 05
	11007	Herald Printing & Publishing Co.,		
		Annual Reports.....		400 50
	11008	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		435 79
	11009	Geo. Carroll & Bros. Co.,		
		Repairing piers and dock.....		500 00

April—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
27	11010	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....	\$	16 85
	11011	The Lake Shore & Michigan Southern R'y Co.,		
		Freight on pipe.....		32 05
	11012	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		372 99
	11013	A. S. Pinney,		
		Repairing piers and dock.....		125 00
		Total.....		\$7,800 29

May.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	11014	T. W. Shacklett,		
		Services as Commissioner, 2 months.....	\$	150 00
	11015	Clark Olds,		
		Services as Commissioner, 2 months.....		150 00
	11016	G. F. Brevillier,		
		Services as Commissioner, 2 months.....		150 00
	11017	Pay Roll, Office and Inspectors,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y.		841 66
	11018	Pay Roll, Pumping Station,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y.		935 00
4	11019	Thomas A. Walton,		
		Repairing piers and dock.....		100 00
	11020	The Lake Shore & Michigan Southern R'y Co.		
		Freight.....		12 50
	11021	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		51 33
	11022	J. C. Quintus,		
		Plans and specifications.....		75 00
	11023	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		631 57
	11024	H. F. Watson Company,		
		Paper.....		1 00
	11025	Union Ice Co.,		
		Ice.....		1 40
	11026	Erie Steam Bending Works,		
		Hickory pieces.....		2 00
	11027	Library Bureau,		
		Guide cards.....		2 50
	11028	O. C. Thayer & Son,		
		Cement, etc.....		3 00
	11029	Mehl & Sapper,		
		Hardware.....		3 89
	11030	H. C. Gross,		
		Wood.....		4 40
	11031	Erie Window Glass Co.,		
		Glass and benzine.....		5 30
	11032	David Schlosser & Sons,		
		Lumber.....		5 79
	11033	Thomson Meter Co.,		
		Repairing.....		5 91
	11034	Engineering News,		
		Annual subscription.....		5 00

May—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
11035		Erie Company,		
		Coke	\$	6 23
11036		G. J. Gebhardt,		
		Coal		6 25
11037		Central Blacksmith Works,		
		Blacksmithing		6 40
11038		Herald Printing & Publishing Co.,		
		Stationery		6 55
11039		Wm. F. Nick,		
		Paints and oils		7 05
11040		Jarecki Manufacturing Co.,		
		Fittings		7 48
11041		The Bristol Company,		
		Charts		7 50
11042		Keystone Brass Co.,		
		Fittings		7 55
11043		Union Oil Works,		
		Oil		8 56
11044		U. D. Sweigard,		
		Lanterns		10 00
11045		Lake City Machine Shop,		
		Tools		16 00
11046		Holland's Manufacturing Co.,		
		Tools		16 05
11047		Wm. Densmore & Co.,		
		Oats		17 50
11048		South Erie Iron Works,		
		Meter tops		18 00
11049		Lyman Felheim,		
		Lumber		18 66
11050		E. J. Riblet,		
		Rent of shop		20 00
11051		Henry Beckman & Sons,		
		Clover seed		26 00
11052		Ashby & Vincent,		
		Stationery		26 55
11053		Constable Bros.,		
		Lumber and labor		27 49
11054		Erie Forge Company, Ltd.,		
		Material and labor		28 90
11055		Erie Machine Shop,		
		Material and labor		29 00
11056		A. S. Pinney,		
		Hardware		30 59
11057		Wm. G. Johnston & Co.,		
		Loose leaf journal		30 97
11058		Joseph Wills,		
		Registering gauge		65 00
11059		James L. Firman,		
		Teaming		87 91
11060		Erie Oil Company,		
		Oil		110 94
11061		Hays Manufacturing Co.,		
		Fittings, labor, etc.		154 81
11062		Wm. Schade,		
		Blacksmithing and material		177 55
11063		Warner Bros.,		
		Linoleum, matting, etc.		201 38

May—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11064	Mayer Bros.,	Repairing pavements.....	\$ 214 42
11065	Keystone Electric Company,	Electrical machines and repairs.....	306 66
11066	Erie Mfg. & Supply Co.,	Hoists, waste, packing, etc.....	378 57
11067	Momeyer & Graf, use The W. L. Scott Company,	Coal.....	640 24
11068	United States Cast Iron Pipe & Foundry Co.,	Cast iron pipe and specials.....	3,935 91
11069	Geo. C. Gensheimer, Ass't Sec'y	Sundries	7 98
11070	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	628 35
11071	Ashby & Vincent,	Blank reports.....	200 60
18 11072	Thomas A. Walton,	Repairing piers and docks.....	100 00
11073	Geo. C. Gensheimer, Ass't Sec'y,	Sundries	12 29
11074	T. W. Shacklett,	Services as Commissioner.....	50 00
11075	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk	610 77
25 11076	Mrs. Kate Stablein,	Connections, repairs.....	2 30
11077	Geo. C. Gensheimer, Ass't Sec'y,	Sundries	16 06
11078	Erie Sand & Gravel Co., Inc.,	Repairing piers and dock.....	49 00
11079	Geo. Carroll & Bro. Co.,	Repairing piers and dock.....	525 00
11080	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	641 78
11081	Thomas A. Walton,	Repairing piers and dock.....	75 00
Total.....			\$12,709 05

June.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	11082	Geo. C. Gensheimer, Ass't Sec'y,	Sundries.....	\$ 41 28
	11083	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	517 02
	11084	Pay Roll, Office and Inspectors,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	851 66
	11085	Pay Roll, Pumping Station,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	935 00
8	11086	J. L. Kelley,	Repairing lawn mower.....	1 00
	11087	Pennsylvania Rubber Works,	Stock rubber.....	1 23
	11088	Lyman Felheim,	Pipe plugs and lumber.....	1 29
	11089	The Conard & Jones Company,	Plants.....	1 50
	11090	Keystone Brass Co.,	Tubing, etc.....	1 54
	11091	Municipal Engineering Co.,	Annual subscription.....	2 00
	11092	Franklin Coal Co.,	Wood.....	2 25
	11093	Union Iron Works,	Material and labor.....	2 42
	11094	J. Jacobs,	Oilskins.....	2 50
	11095	Keystone Blue Paper Co.,	Bevel scale and ink.....	2 70
	11096	Deming Bros.,	Meter box.....	3 00
	11097	Central Blacksmith Works,	Blacksmithing.....	3 20
	11098	Wm. F. Nick & Son,	Oil, etc.....	3 45
	11099	Murphy Bros.;	Oil cans, galvanized pipe and solder.....	3 50
	11100	Erie Window Glass Co.,	Glass.....	3 50
	11101	U. D. Sweigard,	Repairing pump, etc.....	4 41
	11102	G. J. Gebhardt,	Blacksmithing coal.....	5 00
	11103	Jarecki Manufacturing Co.,	Expansion joint, bushings and globe valve.....	5 89
	11104	Henry Beckman & Sons,	Clover seed.....	6 50
	11105	A. S. Pinney,	Hardware.....	7 95
	11106	Erie Company,	Coke.....	9 59
	11107	O. C. Thayer & Son,	Cement and tile.....	10 30
	11108	Standard Brick Works,	Brick.....	10 80
	11109	Keystone Electric Company,	Material and labor for electric plant.....	10 95
	11110	H. C. Dunn, Manager,	Brick.....	11 05

June—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11111	Herald Printing & Publishing Co.,		
		Stationery	\$	11 25
	11112	C. Kessler,		
		Soap, wicks, mop cloths, etc.....		17 40
	11113	Wm. Densmore & Co.,		
		Oats.....		18 00
	11114	Mehl & Sapper,		
		Hardware		19 07
	11115	John Reinhold, jr.,		
		Oils and paints.....		23 60
	11116	E. J. Riblet,		
		Rent of shop and fixing chair.....		24 40
	11117	U. S. Cast Iron Pipe and Foundry Co.,		
		Cast iron tee.....		28 24
	11118	Constable Bros.,		
		Material and labor		33 94
	11119	Erie Engine Works,		
		Material and labor		34 71
	11120	Mutual Telephone Company,		
		Rental of telephones.....		36 00
	11121	Henry R. Worthington,		
		Water valves for fifteen million gallon engine...		49 35
	11122	Globe Iron Foundry Co.,		
		Castings		72 86
	11123	Union Water Meter Co.,		
		Meters and repairs		188 75
	11124	Momeyer & Graff, use The W. L. Scott Company,		
		Coal		1,338 05
	11125	Union Ice Co.,		
		Ice.....		1 75
	11126	Mayer Bros.,		
		Repairing paved streets.....		9 19
	11127	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries		15 17
	11128	James L. Firman,		
		Teaming.....		28 43
	11129	Erie Manufacturing & Supply Co.,		
		Drill press, waste, packing, etc.....		338 46
	11130	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		565 88
	11131	Hays Manufacturing Co.,		
		Pipe and fittings		1,167 14
15	11132	Wm. Roy,		
		Painting at pumping station		8 75
	11133	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries		11 20
	11134	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		643 51
22	11135	Thomas A. Walton,		
		Repairing piers and dock		50 00
	11136	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		591 39
29	11137	Mrs. Orilla Block,		
		Washing towels.....		6 00
	11138	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		93 25
	11139	Clark Olds,		
		Services as Commissioner, 2 months.....		150 00

June—Continued.

TO PAY VOUCHER.

Date, No.	Of	For	Amount.
11140	G. F. Brevillier,		
	Services as Commissioner, 2 months.....	\$	150 00
11141	Willis B. Durlin,		
	Services as Commissioner.....		100 00
11142	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk		629 36
11143	Pay Roll, Office and Inspectors,		
	Disbursed by Geo. C. Gensheimer, Ass't Sec'y ..		851 66
11144	Pay Roll, Pumping Station,		
	Disbursed by Geo. C. Gensheimer, Ass't Sec'y ..		935 00
Total.....			\$ 10,704 24

July.

TO PAY VOUCHER.

Date, No.	Of	For	Amount.
6 11145	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries.....	\$	13 15
11146	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk		508 04
13 11147	D. McCarty,		
	Tile		1 15
11148	Wm. F. Nick & Son,		
	Oil, etc.....		1 30
11149	Lyons Bros.,		
	Repairs to connections.....		2 50
11150	T. S. Buck,		
	Repairing numbering machine.....		2 97
11151	Duerner's Cooper Works,		
	Tub		3 00
11152	Henry Mayer,		
	Washed gravel.....		3 00
11153	W. C. Hull,		
	Blacksmithing		3 20
11154	Hollands Manufacturing Co.,		
	Tools		3 23
11155	Erie Window Glass Co.,		
	Glass		3 50
11156	D. McCormick & Co.,		
	Repairing tool wagons.....		3 60
11157	Thomson Meter Co.,		
	Repairing meters.....		3 87
11158	L. Vincent Metz,		
	Work on map.....		4 40
11159	H. C. Gross,		
	Wood		4 40
11160	Lyman Felheim,		
	Wooden plugs.....		4 48
11161	Deming Bros.,		
	Meter box.....		4 50
11162	A. S. Pinney,		
	Hardware		5 67
11163	New York & Penna. Telephone and Telegraph Co.,		
	Telephone service.....		6 00
11164	Erie Company,		
	Coke.....		6 43

July—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11165	O. C. Thayer & Son,	Cement and lime.....	\$ 7 05
11166	W. J. Butler, agent,	Repairing connections.....	7 27
11167	Edison Construction and Supply Department,	Electric appliances.....	7 32
11168	D. P. Murphy,	Work at Pumping Station.....	10 13
11169	Mehl & Sapper,	Hardware.....	11 27
11170	John Reinhold, jr.,	Oils, etc.....	14 05
11171	Ball Engine Works,	Large wrench.....	14 13
11172	Frank Dudenhoeffer,	Brick.....	15 63
11173	U. D. Sweigard,	Lanterns, etc.....	15 70
11174	James L. Firman,	Teaming.....	18 99
11175	E. J. Riblet,	Rent of shop.....	20 00
11176	Union Water Meter Company,	Repairing Meter.....	22 90
11177	Constable Bros.,	Repairs at Pumping Station.....	25 74
11178	The Himrod Engraving Company,	Stationery.....	28 75
11179	R. T. Walker,	Rent of barn.....	30 00
11180	Americon Oil Works,	Boiler compound.....	33 57
11181	William Schade,	Blacksmithing.....	39 97
11182	Schluraff Floral Co.,	Flower bed at Pumping Station Park.....	40 00
11183	Herald Printing and Publishing Co.,	Warrants, books, etc.....	47 75
11184	Erie City Iron Works,	Arc liners for boilers.....	60 60
11185	National Carbon Co.,	Carbons.....	81 67
11186	Erie Machine Shop,	Machine work.....	84 09
11187	Globe Iron Foundry Co.,	Castings.....	98 00
11188	Erie Engine Works,	Boring bar, etc.....	101 93
11189	Erie Oil Co.,	Oil.....	133 64
11190	Union Oil Works,	Oil.....	162 25
11191	Erie Mfg. and Supply Co.,	Waste, packing, forge, etc.....	210 98
11192	Henry Herbst, Collector,	Taxes, Fourth Ward.....	231 25
11193	The W. L. Scott Company,	Coal.....	359 84

July—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11194	Hays Manufacturing Co.,		
		Pipe, fittings, etc.....	\$	416 79
	11195	United States Cast Iron Pipe and Foundry Company,		
		Cast iron pipe.....		1,729 00
	11196	S. G. Ames,		
		Blacksmithing		9 10
	11197	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		15 89
	11198	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		645 86
20	11199	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		25 09
	11200	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		663 94
27	11201	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		10 70
	11202	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		649 78
Total				\$ 6,689 01

August.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	11203	Pay Roll, Office and Inspectors,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	\$	851 66
	11204	Pay Roll, Pumping Station,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		935 00
3	11205	T. H. Gray,		
		Medical attendance.....		10 00
	11206	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		22 42
	11207	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		646 18
10	11208	Union Water Meter Co.,		
		Repairs to meter.....		1 00
	11209	Keystone Brass Co.,		
		Sheet copper, etc.....		1 35
	11210	Lyman Felheim,		
		Mortar box		1 75
	11211	J. G. Schlidwein,		
		Wagon grease and repairs to harness.....		1 85
	11212	Keystone Electric Company,		
		Repairs to arc lamps		2 44
	11213	G. J. Gebhardt,		
		Blacksmith coal.....		2 60
	11214	Erie Company,		
		Coke.....		2 85
	11215	The Erie City Directory,		
		Erie City Directory.....		3 00
	11216	Fire and Water,		
		Annual subscription.....		3 00
	11217	F. A. Douglas,		
		Repairs to electrical bell at pumping station		3 30
	11218	C. Kessler,		
		Brooms, etc.....		3 60

August—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11219	Warfel & Arbuckle,		
		Fly nets for horses	\$ 4 00
11220	Erie Machine Shops,		
		Repairs to Gaskill engine	4 93
11221	U. D. Sweigard,		
		Galvanized iron, solder and labor	5 02
11222	W. C. Hull,		
		Blacksmithing.....	5 60
11223	Thomson Meter Co.,		
		Repairs to meters	6 05
11224	Wm. E. Louch,		
		Canvas hose	7 50
11225	Union Ice Co.,		
		Ice	8 96
11226	Hollands Manufacturing Co.,		
		Repairs to wrenches, etc.....	9 18
11227	A. S. Pinney,		
		Hardware	9 43
11228	Bacon Novelty Co.,		
		Railroad ties.....	10 00
11229	John Reinhold, jr.,		
		Asphaltum, brush and sponges.....	10 95
11230	Mehl & Sapper,		
		Hardware	11 37
11231	Erie City Granite and Marble Co.,		
		Stone for drinking fountain.....	12 00
11232	Jarecki Manufacturing Co.,		
		Fittings.....	13 25
11233	Edison Construction and Supply Department,		
		Repairs to electric lights.....	13 32
11234	O. C. Thayer & Son,		
		Cement and tile.....	14 81
11235	Wm. Densmore & Co.,		
		Oats.....	18 00
11236	Erie Forge Company,		
		Forging for Gaskill engine.....	19 00
11237	R. D. Wood & Co.,		
		Repairs to fire hydrants	19 20
11238	E. J. Riblet,		
		Rent of shop.....	20 00
11239	H. C. Dunn, Manager,		
		Brick	26 65
11240	The Henesey Manufacturing Co.,		
		Leather washers	26 95
11241	Westinghouse Electric and Mfg. Company,		
		Worm gear for boring bar.....	27 85
11242	The Constable Bros. Company,		
		Material and labor	31 46
11243	Ashby Printing Co.,		
		Stationery and printing.....	35 50
11244	The Cleveland Trinidad Paving Co.,		
		Repairs to asphalt pavements.....	38 25
11245	Globe Iron Foundry Co.,		
		Castings.....	40 00
11246	W. E. Long, Collector,		
		Taxes, Sixth Ward.....	59 75
11247	James L. Firman,		
		Teaming.....	75 52

August—Continued.

		TO PAY VOUCHER.		Amount.
Date.	No.	Of	For	
	11248	The J. L. Mott Iron Works,	Drinking fountain.....	\$ 89 00
	11249	Henry R. Worthington,	Valves for Worthington engine.....	118 12
	11250	Erie Manufacturing and Supply Co.,	Waste packing, etc.	127 36
	11251	Union Oil Works,	Oil.....	177 54
	11252	Hays Manufacturing Company,	Pipe, fittings, etc.....	570 61
	11253	The W. L. Scott Co.,	Coal	1,071 76
	11254	United States Cast Iron Pipe and Foundry Company,	Pipe and specials.....	1,216 30
	11255	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk	621 78
	11256	Geo. C. Gensheimer, Ass't Sec'y,	Sundries.....	36 02
17	11257	Geo. C. Gensheimer, Ass't Sec'y,	Sundries	9 23
	11258	Pennsylvania Company,	Freight on wrought iron pipe.....	14 25
	11259	The Perfection Steam Clamp Mfg. Co.,	Clamps for steam pipe.....	23 67
	11260	B. E. Briggs, City Engineer,	Stone for filling sectional piers.....	25 00
	11261	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk	581 82
	11262	Oil Well Supply Co.,	Galvanized iron pipe	699 85
23	11263	Hoyt Metal Company,	Pig lead	1,774 16
24	11264	Geo. C. Gensheimer, Ass't Sec'y,	Sundries.....	11 07
	11265	Nelson Meyette,	Painting walls and ceiling of office.....	76 00
	11266	Pay Roll, Street Work,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	590 53
	11267	Thomas A. Walton,	Repairing piers and dock.....	25 00
31	11268	Thomas Paskett,	Stone for filling sectional piers	101 30
	11269	Thomas A. Walton,	Repairing piers and dock.....	149 70
	11270	Clark Olds,	Services as Commissioner, 2 months.....	150 00
	11271	G. F. Brevillier,	Services as Commissioner, 2 months.....	150 00
	11272	Willis B. Durlin,	Services as Commissioner, 2 months.....	150 00
	11273	Pay Roll, Office and Inspectors,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	851 66
	11274	Pay Roll, Pumping Station,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	935 00
	11275	Geo. C. Gensheimer, Ass't Sec'y,	Sundries.....	8 65
	11276	Pay Roll, Street Work,	Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	696 02
Total.....				\$ 14,127 90

September.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
7	11277	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....	\$	12 83
	11278	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk		633 37
14	11279	J. G. Schlindwein,		
		Repairs to harness.....		1 20
	11280	Gus. J. Miller,		
		Sponges and paris green.....		1 25
	11281	Jarecki Manufacturing Co.,		
		Fittings.....		1 25
	11282	Keystone Brass Co.,		
		Material and labor		1 35
	11283	The Constable Bros. Company,		
		Material and labor		1 75
	11284	U. D. Sweigard,		
		Material and labor		1 96
	11285	Wm. F. Nick & Son,		
		Oil, etc.....		2 40
	11286	T. E. Healy,		
		Rolled oats.....		2 85
	11287	Curtis Johnson & Son,		
		Repairs to meter box.....		3 25
	11288	Erie Machine Shops,		
		Material and labor		3 33
	11289	Hollands Manufacturing Co.,		
		Repairs to tools		4 05
	11290	W. C. Hull,		
		Blacksmithing		5 60
	11291	H. C. Gross,		
		Wood		4 40
	11292	John Reinhold, jr.,		
		Paints and oils		7 10
	11293	Emil Streuber,		
		Sole leather.....		7 56
	11294	Erie Company,		
		Coke		7 60
	11295	Lyman Felheim,		
		Wooden plugs and lumber.....		8 28
	11296	Keystone Electric Co.,		
		Repairs to electric light plant.....		9 60
	11297	Union Iron Works,		
		Material and labor		11 07
	11298	C. Kessler,		
		Soap, brooms, etc.		12 50
	11299	The Erie Real Estate Title Company,		
		Abstract to real estate		13 00
	11300	Union Oil Works,		
		Oil		13 04
	11301	Louis J. Bauman,		
		Cleaning carpets.....		13 23
	11302	H. C. Dunn, Manager,		
		Brick		14 30
	11303	O. C. Thayer & Son,		
		Tile and cement.....		16 95
	11304	E. J. Riblet,		
		Rent of shop.....		20 00
	11305	Mehl & Sapper,		
		Hardware		20 40



G. F. BREVILLIER.

COMMISSIONER SINCE 1900.

September—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11306	Edison Construction and Supply Department,	Repairs to Electric Light plant.....	\$ 22 35
11307	Wm. Schade,	Blacksmithing and material.....	22 79
11308	Mayer Bros.,	Repairing paved streets.....	21 74
11309	Wm. Densmore & Co.,	Oats	22 50
11310	Union Ice Company,	Ice.....	29 42
11311	Lake City Machine Shop,	Material and labor.....	30 00
11312	Dickson & Gee,	Powder, fuse and caps.....	30 51
11313	A. S. Pinney,	Hardware	32 49
11314	Erie City Iron Works,	Castings.....	36 00
11315	Mutual Telephone Company,	Use of telephones and lines.....	36 00
11316	James L. Firman,	Teaming.....	55 06
11317	Ashby Printing Co.,	Printing and stationery.....	68 70
11318	Henry R. Worthington,	Material for pumping engine.....	103 45
11319	Erie Oil Company,	Oil.....	125 78
11320	Union Water Meter Co.,	Meters	180 00
11321	Isador Sobel, Postmaster,	Postal cards.....	158 25
11322	Erie Manufacturing and Supply Co.,	Waste, packing, etc.....	191 88
11323	Hays Manufacturing Co.,	Pipes, fittings, etc.....	49 43
11324	The W. L. Scott Company,	Coal.....	645 04
11325	United States Cast Iron Pipe and Foundry Company,	Pipe and specials.....	1,174 44
11326	R. D. Wood & Co.,	Valves, fire hydrants, etc.....	1,264 50
11327	Geo. C. Gensheimer, Ass't Sec'y,	Sundries	5 45
11328	Joseph Land,	Setting curbstones.....	14 40
11329	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk	700 99
11330	Harriett Cochran,	Real estate.....	600 00
21 11331	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk	576 22
28 11332	Union Manufacturing Co.,	Repairs to tools.....	2 16
11333	Geo. C. Gensheimer, Ass't Sec'y,	Sundries.....	30 77
11334	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	698 26

September—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11335	Pay Roll, Office and Inspectors, Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		\$884 16
11336	Pay Roll, Pumping Station, Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		940 00
Total.....			\$ 10,050 21

October.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
1 11337	W. A. Tompkins,		
	Dory.....	\$	35 00
11338	Pennsylvania Company,		
	Limestone siftings.....		37 50
5 11339	Held, Gorenflo & Co.,		
	Blank quarterly bills for 1902.....		32 50
11340	Geo. C. Gensheimer, Ass't Sec'y,		
	Sundries.....		34 01
11341	John J. O'Brien,		
	Assessment notices for 1902.....		39 90
11342	Pay Roll, Street Work,		
	Disbursed by M. L. Whitley, Clerk		748 08
12 11343	The Sunday Messenger Co.,		
	Advertising for bids on pier work.....		1 00
11344	Keystone Brass Co.,		
	Repairing boiler.....		1 25
11345	Locke Regulator Co.,		
	Chain for steel plate chimney.....		1 75
11346	T. E. Healy,		
	Oat meal.....		2 00
11347	E. J. Morton,		
	Civil engineering.....		3 00
11348	Lyman Felheim,		
	Wooden plugs.....		3 12
11349	Hollands Manufacturing Co.,		
	Repairs to tools.....		3 48
11350	H. C. Gross,		
	Wood for fuel.....		4 40
11351	Central Blacksmith Works,		
	Blacksmithing.....		4 40
11352	Erie Forge Company, Ltd.,		
	Steel pins.....		4 86
11353	The Dispatch Publishing Company,		
	Advertising for bids on pier work and stone.....		5 50
11354	Held, Gorenflo & Co.,		
	Advertising for bids on pier work and stone.....		5 50
11355	Mehl & Sapper,		
	Hardware		5 56
11356	Erie Company,		
	Coke		5 68
11357	Jarecki Manufacturing Co.,		
	Fittings.....		5 71
11358	New York & Penn'a Telephone and Telegraph Co.,		
	Rent of telephone.....		6 00
11359	Pennsylvania Rubber Co.,		
	Sheet rubber.....		6 51

October—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11360	Steiner Manufacturing Works,		
		Repairing drinking fountain	\$	7 53
	11361	Times Publishing Company,		
		Advertising for bids on pier work and stone....		8 00
	11362	C. Kessler,		
		Brooms, soap, candles, etc.....		8 40
	11363	Herald Printing and Publishing Co.,		
		Advertising for bids on pier work and stone....		8 96
	11364	Ashby Printing Co.,		
		Stationery and ink.....		9 15
	11365	Superior Stamp Co.,		
		Dies for coupon cutters.....		9 30
	11366	H. Hausman,		
		Decorations, account death of Wm. McKinley..		10 00
	11367	Union Ice Company,		
		Ice.....		12 13
	11368	A. S. Pinney,		
		Hardware		14 60
	11369	The Lake Shore & Michigan Southern Ry. Co.,		
		Freight on pipe and specials		15 35
	11370	E. J. Riblet,		
		Rent of shop.....		20 00
	11371	James L. Firman,		
		Teaming.....		21 67
	11372	The Gem City Mills,		
		Oats		22 50
	11373	Erie Machine Shop,		
		Labor and material.....		32 97
	11374	Erie Metal Co.,		
		Bronze castings.....		34 14
	11375	American Oil Works,		
		Boiler compound.....		34 41
	11376	H. C. Dunn, Mgr.,		
		Brick.....		35 75
	11377	Erie Manufacturing and Supply Co.,		
		Waste, packing, tools, etc.....		136 52
	11378	Union Oil Works,		
		Oil.....		137 40
	11379	Globe Iron Foundry Co.,		
		Castings.....		182 00
	11380	Erie Engine Works,		
		Labor and material.....		243 13
	11381	Hays Manufacturing Co.,		
		Pipe, fittings, specials, etc.....		258 64
	11382	Union Water Meter Company,		
		Meter		293 00
	11383	The W. L. Scott Company,		
		Fuel.....		379 92
	11384	R. D. Wood & Co.,		
		Fire hydrants and stop valves.....		721 75
	11385	U. S. Cast Iron Pipe and Foundry Co.,		
		Pipe and specials.....		902 35
	11386	Mayer Bros.,		
		Repairing cuts in pavements		14 88
	11387	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		23 99
	11388	Michael McMahon,		
		Old rope.....		24 54

October—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11389	Holly Manufacturing Company,		
		Material and labor	\$ 610 84	
	11390	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....	669 94	
	11391	Fire and Water,		
		.....	4 50	
19	11392	O. C. Thayer & Son,		
		Lime and cement	8 10	
	11393	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries	20 43	
	11394	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	552 64	
26	11395	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries	16 15	
	11396	George E. Leet,		
		Printed envelopes for 1902.....	20 75	
	11397	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	649 36	
	11398	The Lake Shore & Michigan Southern Ry. Co.,		
		Freight on pipe and specials	45 20	
	11399	The Constable Bros. Co.,		
		Timber on piers.....	1,349 31	
Total.....				\$ 8,566 91

November.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
1	11400	Clark Olds,		
		Services as Commissioner, 2 months.....	\$ 150 00	
	11401	G. F. Brevillier,		
		Services as Commissioner, 2 months.....	150 00	
	11402	Willis B. Durlin,		
		Services as Commissioner, 2 months.....	150 00	
	11403	Pay Roll, Office and Inspectors,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y ..	884 16	
	11404	Pay Roll, Pumping Station,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y..	940 00	
2	11405	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries	15 00	
	11406	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	660 23	
	11407	John O. Baker,		
		Material and labor	500 00	
9	11408	S. G. Ames,		
		Repairs to tool wagon	1 25	
	11409	The Electric Equipment Co.,		
		Repairs to electric light plant.....	1 40	
	11410	Erie Metal Co.,		
		Bronze casting for engine repairs.....	1 91	
	11411	O. C. Thayer & Son,		
		Tile and cement.....	2 73	
	11412	P. J. Wissler,		
		Repairing paved streets.....	3 32	
	11413	U. D. Sweigard,		
		Repairs to galvanized iron pumps	3 42	

November—Continued.

TO PAY VOUCHER.

Date. No.	Of	For	Amount.
11414	Erie Window Glass Co.,		
		Ruby glass.....	\$ 3 50
11415	George L. Siegel,		
		Rye straw and oil meal.....	3 92
11416	Central Blacksmith Works,		
		Horse shoeing.....	4 40
11417	Lyman Felheim,		
		Wooden plugs.....	4 44
11418	Henry Beckman & Sons,		
		Soap and lye.....	4 50
11419	Deming Bros.,		
		Meter box.....	4 50
11420	J. H. Braggins,		
		Repairs to steam pipe.....	4 64
11421	Union Ice Company,		
		Ice.....	4 65
11422	James McCrea & Co.,		
		Gaskets for steam pipe.....	4 80
11423	Murphy Bros.,		
		Pails, charcoal, etc.....	5 85
11424	Keystone Brass Co.,		
		Sheet copper, brass and labor.....	6 70
11425	Erie Hard Wall Plaster Co.,		
		Cement.....	7 50
11426	Erie Company,		
		Coke.....	8 79
11427	G. J. Gebhardt,		
		Coal for blacksmithing.....	12 00
11428	Schluraff Floral Co.,		
		Palms.....	12 00
11429	Wm. Schade,		
		Blacksmithing and material.....	12 08
11430	A. S. Pinney,		
		Hardware.....	12 43
11431	Edison Constiuction and Supply Department,		
		Repairs to electric light plant.....	14 76
11432	Martin Quigley,		
		Old rope.....	15 57
11433	Jarecki Manufacturing Co.,		
		Fittings, etc.....	17 39
11434	H. C. Dunn, Mgr.,		
		Brick.....	19 50
11435	E. J. Riblet,		
		Shop Rent.....	20 00
11436	Erie Engine Works,		
		Material and labor.....	22 45
11437	Wm. Densmore & Co.,		
		Oats.....	22 50
11438	Thos. Pickering,		
		Carriage hire.....	28 00
11439	Herald Printing and Publishing Co.,		
		Books and stationery.....	29 23
11440	Union Iron Works,		
		Labor on boilers.....	32 00
11441	Erie Machine Shops,		
		Material and labor.....	34 70
11442	South Erie Iron Works,		
		Meter tops.....	37 00

November—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11443	James L. Firman,		
		Teaming	\$	38 51
	11444	Thomson Meter Co.,		
		Repairs to meters		38 78
	11445	Mehl & Sapper,		
		Hardware		44 22
	11446	Lake City Machine Shop,		
		Pipe taps		46 50
	11447	Erie Manufacturing and Supply Co.,		
		Waste, packing, etc		105 46
	11448	Globe Iron Foundry Co.,		
		Castings		115 86
	11449	Erie Oil Company,		
		Oil		134 24
	11450	W. P. Mason,		
		Analyzing water		160 00
	11451	Union Water Meter Co.,		
		Meters and repairs		221 50
	11452	Hays Manufacturing Co.,		
		Pipe, fittings, etc		558 08
	11453	The Holly Manufacturing Co.,		
		Pump valves		607 50
	11454	The W. L. Scott Company,		
		Coal		817 84
	11455	United States Cast Iron Pipe and Foundry Co.,		
		Cast iron pipe and specials	1,040	41
	11456	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries		26 99
	11457	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	621	65
16	11458	Alois Bayhurst,		
		County taxes		1 25
	11459	W. E. Long, Collector,		
		County taxes		1 88
	11460	Miss Hattie Thayer,		
		County taxes		2 50
	11461	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries		24 90
	11462	John O. Baker,		
		Material and labor	500	00
	11463	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	512	92
23	11464	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk	661	14
	11465	Geo. C. Gensheimer, Ass't Sec'y		
		Sundries		14 05
30	11466	The Adams-Bagnall Electric Co.,		
		Arc lamp		18 00
	11467	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries		18 26
	11468	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, clerk	574	31
	11469	Pay Roll, Office and Inspectors,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y ..	889	16
	11470	Pay Roll, Pumping Station,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y ..	940	00
	11471	John O. Baker,		
		Material and labor	200	00
Total				\$ 12,809 13

December.

TO PAY VOUCHER.

Date, No.	Of	For	Amount.
3 11472	National Lead Company,	Lead pipe.....	\$ 250 46
7 11473	Geo. C. Gensheimer, Ass't Sec'y,	Sundries	17 51
11474	Pay Roll, Street Work,	Disbursed by M. L. Whitley, Clerk.....	685 66
11475	Adolphus A. Knudson,	Electrical Investigation.....	400 00
14 11476	J. G. Schlindwein,	Repairing harness.....	1 00
11477	Edison Construction & Supply Dep't,	Repairs to Electric Light Plant.....	1 20
11478	Simon Pfister,	Galvanized pails.....	1 30
11479	R. T. Williams & Co.,	Repairs to hand basin in office.....	1 35
11480	Keystone Brass Co.,	Sheet brass and brass castings	1 96
11481	F. A. Douglas,	Repairs to electric bells.....	2 09
11482	Mayer Bros.,	Repairing pavements.....	2 20
11483	John H. Walker,	Stationery.....	3 00
11484	Wm. F. Nick,	Paints, oils, etc.....	3 10
11485	Erie Steam Bending Works,	Stakes.....	3 25
11486	Geogre L. Siegel,	Straw, etc.....	3 38
11487	The Himrod Engraving Company.	Stationery and printing.....	4 00
11488	James H. Matthews & Co.,	Rubber stamps.....	4 00
11489	H. C. Gross,	Wood	4 40
11490	The Adams-Bagnall Electric Co.,	Globes for arc lamps.....	4 50
11491	Lyman Felheim,	Lumber	4 61
11492	The Electric Equipment Co.	Repairs to Electric Light Plant.....	4 65
11493	Holland's Manufacturing Co.,	Tools and repairs.....	4 65
11494	Union Ice Company,	Ice	5 15
11495	Mehl & Sapper,	Hardware.....	5 80
11496	The Lake Shore & Michigan Southern R'y Co.,	Freight	6 82
11497	Wm. Schade,	Blacksmithing	7 32
11498	John Reinhold, Jr.,	Paints, oils, etc.....	7 95
11499	Herald Printing & Publishing Co.,	Stationery.....	8 00
11500	A. S. Pinney,	Hardware	10 06

December—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
11501		Erie Company,		
		Coke	\$	10 82
11502		Central Blacksmith Works,		
		Blacksmithing		10 90
11503		Homer M. Hill,		
		Insurance.....		12 50
11504		Thomas M. Hemphill,		
		Insurance.....		12 50
11505		Walter Scott & Co.,		
		Insurance.....		12 50
11506		L. J. Van Anden & Co.,		
		Insurance.....		12 50
11507		American Enameled Brick and Tile Co.,		
		Brick.....		12 65
11508		Erie Hard Wall Plaster Co.,		
		Cement.....		13 50
11509		Keystone Electric Company,		
		Repairing electric light plant.....		17 65
11510		Ashby Printing Co.,		
		Stationery.....		18 65
11511		E. J. Riblet,		
		Rent of shop.....		20 00
11512		Union Water Meter Company,		
		Repairs to meters.....		21 25
11513		The Gem City Mills,		
		Oats.....		25 00
11514		R. T. Walker,		
		Rent of barn.....		30 00
11515		The Lake Shore & Michigan Southern Ry. Co.,		
		Freight.....		32 60
11516		Mutual Telephone Company,		
		Rent of telephones.....		36 00
11517		H. C. Dunn, Mgr.,		
		Brick.....		37 70
11518		American Oil Works,		
		Boiler compound.....		38 61
11519		The Constable Bros. Company,		
		Repairs at pumping station.....		40 75
11520		Erie Engine Works,		
		Repairs to engine		41 81
11521		The Bristol Company,		
		Recording gauge.....		55 00
11522		U. D. Sweigard,		
		Repairs to engine house, etc		69 17
11523		James L. Firman,		
		Teaming.....		70 10
11524		National Lead Company,		
		Wiping solder.....		132 50
11525		Union Oil Works,		
		Oil.....		170 08
11526		Globe Iron Foundry Co.,		
		Castings.....		259 00
11527		Erie Manufacturing and Supply Co.,		
		Waste, packing, etc.....		370 58
11528		Hays Manufacturing Co.,		
		Pipe, fittings, etc.....		515 70
11529		O. C. Thayer & Son,		
		Stone, fire clay and tile.....		569 57

December—Continued.

TO PAY VOUCHER.

Date.	No.	Of	For	Amount.
	11530	The W. L. Scott Company,		
		Coal.....	\$	575 12
	11531	United States Cast Iron Pipe and Foundry Co.,		
		Cast iron pipe and specials.....		1,367 85
	11532	R. D. Wood & Co.,		
		Stop valves and fire hydrants.....		3,373 00
	11533	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		38 36
	11534	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		546 02
21	11535	Thomas M. Hemphill,		
		Insurance.....		2 50
	11536	Homer M. Hill,		
		Insurance.....		2 50
	11537	Walter Scott & Co.,		
		Insurance.....		2 50
	11538	L. J. Van Anden & Co.,		
		Insurance.....		2 50
	11539	S. A. Davenport,		
		Court costs.....		11 60
	11540	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		23 34
	11541	Isador Sobel, Postmaster,		
		Postage stamps.....		100 00
	11542	Clark Olds,		
		Services as Commissioner, 2 months.....		150 00
	11543	G. F. Brevillier,		
		Services as Commissioner, 2 months.....		150 00
	11544	Willis B. Durlin,		
		Services as Commissioner, 2 months.....		150 00
	11545	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		507 89
	11546	Pay Roll, Office and Inspectors,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		889 24
	11547	Pay Roll, Pumping Station,		
		Disbursed by Geo. C. Gensheimer, Ass't Sec'y..		940 00
	11548	Joseph Frank,		
		Plans.....		65 00
28	11549	Geo. C. Gensheimer, Ass't Sec'y,		
		Sundries.....		15 48
	11550	R. D. Wood & Co.,		
		Stop valves.....		186 00
	11551	Pay Roll, Street Work,		
		Disbursed by M. L. Whitley, Clerk.....		541 93
	11552	United States Cast Iron Pipe and Foundry Co.,		
		Cast iron pipe and specials.....		598 07
Total.....				\$ 14,367 86

RECAPITULATION, 1901.

Number Vouchers Issued.	MONTH.	AMOUNTS.
73	January	\$ 8,766 05
51	February.....	4,991 66
49	March.....	7,628 29
62	April.....	7,800 29
68	May	12,709 05
63	June	10,704 24
58	July.....	6,689 01
74	August	14,127 90
60	September.....	10,050 21
63	October.....	8,566 91
72	November	12,809 13
81	December.....	14,367 86
774	Total.....	\$ 119,210 60

DISBURSEMENTS.

DEPARTMENT.	ACCOUNT.	FOR THE YEAR 1901.			From Beginning of Works to December 31, 1901.
		Labor.	Material.	Total.	
Construction.	Advertising Books, S. & P.	<i>a</i> \$ 38	\$ 10 55	\$ 10 93	\$ 702 11
	Boiler No. 1.	<i>g</i>.....	.....	.....	2,335 23
	Boiler No. 2.	<i>g</i>.....	.....	.....	2,335 38
	Boiler No. 3.	<i>g</i>.....	.....	.....	2,335 28
	Boiler No. 4.	<i>g</i>.....	.....	.....	2,335 41
	Boiler No. 5.	<i>g</i>.....	.....	.....	2,312 83
	Boiler No. 6.	<i>g</i>.....	.....	.....	2,312 95
	Boiler No. 7.	<i>g</i>.....	.....	.....	2,313 26
	Boiler No. 8.	<i>g</i>.....	.....	.....	2,324 23
	Boiler House.	406 60	679 83	1,086 43	16,912 67
	Buildings and Grounds. ....	.....	.....	.....	95,192 66
	Civil Engineering ....	.....	.....	.....	8,554 80
	Connections. ....	.....	.....	.....	134,920 60
	Drinking Fountains.	3,638 72	4,089 06	7,727 78	1,874 86
	Electric Light Plant.	<i>d</i> 16 91	117 28	134 19	5,613 64
	Engines and Boilers to December 31, 1901.	<i>a</i>.....	.....	.....	96,715 79
	Engine No. 4.	<i>b</i>.....	.....	.....	48,441 43
	Engine No. 5.	<i>h</i>.....	.....	.....	33,568 49
	Engine House No. 3.	<i>b</i>.....	.....	.....	21,413 19
	Engine Room Furniture and Fixtures. ....	.....	.....	.....	1,910 26
	Expense.	8 09	222 62	230 71	412 09
	Fire Hydrants	<i>a</i> 77	8 04	8 81	33,226 46
	Fuel	317 50	2,948 82	3,266 32	310 18
	Gas Well	<i>a</i> 9 88	15 36	25 24	8,148 59
	High Service System ....	.....	.....	.....	49,429 95
	H. S. S. Stand Pipe No. 2 Iron Work.	<i>h</i> 23 20	638 66	661 86	47 02
	H. S. S. Stand Pipe No. 2, Stone Work.	<i>i</i>.....	.....	.....	40 22

Construction.

Horse, Wagon and Cartage.....	71 84	270 12	341 96	5,793 26
Intake Pipe, No. 1.....	.....	.....	.....	49 474 39
Intake Pipe, No. 2.....	<i>b</i>.....	.....	.....	140,971 03
Interest and Discount.....	.....	.....	.....	99,420 95
Light, Oil Lamps, Wicks, Etc.....	<i>a</i> 2 27	62 52	64 79	350 36
Lowering Mains.....	29 72	818 19	847 91	5,143 13
Mains.....	12,252 42	17,254 56	29,506 98	633,435 07
Main, 30-inch.....	.....	.....	.....	75,956 60
Meters.....	176 85	1,233 79	1,410 64	24,732 83
Office Furniture and Fixtures.....	<i>a</i> 11 25	309 63	320 88	2,771 61
Oil and Tallow.....	<i>b</i>.....	.....	.....	52 25
Park Fountains.....	.....	.....	.....	3 244 68
Railroad Switch and Scales.....	.....	.....	.....	2,918 92
Reservoir.....	.....	.....	.....	123,150 83
Shop Rent.....	<i>a</i> 4 36	120 05	124 41	1,265 52
Steel Plate Chimney No. 1.....	<i>g</i>.....	.....	.....	4,177 53
Stop Valves.....	349 33	4,354 16	4,703 49	44,831 18
Superintendent's Stores.....	.....	.....	.....	217 05
Telephone and Telegraph.....	<i>a</i> 17	4 79	4 96	29 00
Tools.....	598 31	1,771 21	2,369 52	8,657 54
Tools—Coal Elevator and Conveyor.....	<i>j</i> 64 66	1,386 45	1,451 11	1,922 09
Tools—Lathe.....	32 23	19 20	51 43	51 43
Tools—Meter Prover.....	<i>j</i> 1 63	44 85	46 48	491 80
Waste and Packing.....	<i>g</i> 26	7 15	7 41	12 61
Water Lots.....	<i>c</i>.....	.....	.....	15,987 29
Advertising, Books, S. & P.....	<i>a</i> 09	2 55	2 64	520 83
Boilers, to March 5, 1898.....	.....	.....	.....	24,501 08
Boiler No. 1.....	<i>h</i> 66 40	141 27	207 67	619 76
Boiler No. 2.....	<i>h</i> 53 64	144 44	198 08	638 46
Boiler No. 3.....	<i>h</i> 47 71	102 35	150 06	568 37
Boiler No. 4.....	<i>h</i> 47 97	112 65	160 62	584 88
Boiler No. 5.....	<i>h</i> 59 49	133 00	192 49	561 73

a Accounts opened in 1891. *b* Accounts opened in 1892. *c* Accounts opened in 1893. *d* Accounts opened in 1894.
e Accounts opened in 1895. *g* Accounts opened in 1897. *h* Accounts opened in 1898. *i* Accounts opened in 1899.
Accounts opened in 1900. *k* Accounts opened in 1901.

Combine Acc'ts {
"Tools," and {
"Tools"—Lathe. {

Maintenance.

DISBURSEMENTS—Continued.

DEPARTMENT.	ACCOUNT.	FOR THE YEAR 1901.				From Beginning of Works to December 31, 1901.
		Total.				
		Labor.	Material.	Total.		
Maintenance.	Boiler No. 6.....	<i>h</i> 50 83	\$ 99 78	\$ 150 61	\$ 544 03	
	Boiler No. 7.....	<i>h</i> 51 87	100 64	152 51	503 06	
	Boiler No. 8.....	<i>h</i> 55 20	111 57	166 77	534 45	
	Boiler House.....	<i>h</i> 21 15	158 41	179 56	643 13	
	Building and Grounds.....	<i>a</i> 1,463 36	5,801 61	7,264 97	18,831 01	
	Connections.....	3,013 07	2,010 08	5,023 15	22,913 12	
	Drinking Fountains.....	<i>d</i> 23 89	21 96	45 85	299 15	
	Electric Light House.....	<i>c</i> 8 99	71 04	80 03	3,627 96	
	Electric Light Plant.....	<i>b</i> 12 39	191 66	204 05	1,444 38	
	Engines, to December 31, 1892.....	.....	.....	.....	13,402 04	
	Engine No. 1.....	<i>c</i> 01	 40	 41	144 73	
	Engine No. 2.....	<i>c</i> 68	 81	 49	470 65	
	Engine No. 3.....	<i>c</i> 943 68	1,898 81	2,842 49	4,847 91	
	Engine No. 4.....	<i>d</i> 90 23	596 79	687 02	5,471 70	
	Engine No. 5.....	<i>i</i> 57 53	491 71	549 24	1,256 56	
	Engine House No. 1.....	<i>c</i> 2 50	28 19	30 69	1,840 78	
	Engine House No. 2.....	<i>c</i> 40 45	150 89	191 34	8,220 67	
	Engine House No. 3.....	<i>c</i> 58 54	152 43	210 97	2,071 60	
	Engine Room, Furniture and Fixtures.....	<i>a</i> 4 50	123 76	128 26	560 64	
	Expense.....	<i>a</i> 24	6 52	6 76	375 28	
	Fire Hydrants.....	<i>a</i> 242 74	67 99	310 73	3,792 02	
	Fuel.....	<i>a</i> 89	24 39	25 28	264 99	
	High Service System.....	<i>i</i> 13 52	.....	13 52	105 45	
	Horse, Wagon and Cartage.....	.....	.....	.....	5,872 07	
	Intake Pipe No. 1.....	.....	278 42	345 53	165 26	
	Intake Pipe No. 2.....	<i>a</i> 1 90	.....	.....	33 03	
	Light, Oil, Lamps, Wicks, Etc.....	<i>a</i> 1 61	44 26	45 87	225 96	

Maintenance.

Mains and Branches.....	1,535 98	396 74	1,932 72	26,897 86
Main, 30-inch.....	<i>a</i>			910 49
Meters.....		134 14	340 54	6,758 30
Office Furniture and Fixtures.....	<i>a</i>	4 64	111 15	934 83
Oil and Tallow.....	<i>b</i>			26 27
Railroad Switch and Scales.....	<i>a</i>	1 19	34 08	1,220 42
Reservoir.....		137 92	172 29	36,167 00
Shop Rent.....	<i>a</i>	4 36	124 41	1,265 28
Stand Pipe.....	<i>c</i>	5 34	37 69	4,290 51
Steel Plate Chimney No. 1.....	<i>h</i>	81	81	204 13
Stop Valves.....		168 61	316 74	6,629 96
Superintendent's Stores.....				396 52
Telephone and Telegraph.....	<i>j</i>			53
Tools.....		574 19	1,658 91	10,775 51
Tools—Coal Elevator and Conveyor.....	<i>k</i>	37	10 65	10 65
Waste and Packing.....	<i>b</i>	9 53	271 85	333 68
Advertising, Books, S. & P.....	<i>a</i>	15 55	443 50	2,101 41
Buildings and Grounds.....	<i>b</i>	1,243 59	1,243 59	12,175 28
Drinking Fountains.....	<i>g</i>	114 00	114 00	535 23
Electric Light.....	<i>h</i>	65	18 65	353 84
Electric Light Plant.....	<i>b</i>	2 97	84 64	119 48
Engineers and Firemen.....			8,865 73	162,736 93
Engineers' Stores.....				2,348 57
Expense.....	<i>a</i>	3 31	94 47	1,233 53
Fire Hydrants.....	<i>b</i>	512 47	512 47	2,340 67
Flushing Sewers.....	<i>g</i>	6 94	6 94	48 52
Fuel.....		327 97	9,356 60	190,511 43
Horse, Wagon and Cartage.....	<i>d</i>			54 81
Inspectors.....	<i>c</i>	2,561 29	2,561 29	21,973 74
Insurance.....		3 09	88 09	1,693 86
Light, Oil, Lamps, Wicks, Etc.....	<i>a</i>	2 10	59 81	602 43
Machinist.....	<i>j</i>	1,243 59	1,243 59	2,353 47

a Accounts opened in 1891. *b* Accounts opened in 1892. *c* Accounts opened in 1893. *d* Accounts opened in 1894.
e Accounts opened in 1895. *g* Accounts opened in 1897. *h* Accounts opened in 1898. *i* Accounts opened in 1899.
j Accounts opened in 1900. *k* Accounts opened in 1901.

DISBURSEMENTS—Continued.

DEPARTMENT.	ACCOUNT.	FOR THE YEAR 1901.			From Beginning of Works to December 31, 1901.
		Labor.	Material.	Total.	
Operating.	Meters.....	<i>b</i> \$ 357 15	\$.....	\$ 357 15	\$ 4,591 06
	Oil and Tallow.....	64 96	1,788 27	1,853 23	20,266 82
	Rent of Office.....	2 76	76 00	78 76	706 95
	Reservoir.....	497 44	.....	497 44	4,775 14
	Stop Valves.....	12 80	.....	12 80	577 43
	Taxes—U. S., State, County and School.....	10 78	296 63	307 41	3,298 58
	Telephone and Telegraph.....	7 63	210 00	217 63	1,997 94
	Tools.....	<i>a</i>.....	.....	.....	946 02
	Turning On and Off Water.....	<i>g</i> 144 34	.....	144 34	1,238 21
	Waste and Packing.....	26 31	724 20	750 51	9,595 50
Accounting.	Water Rent Returned.....	44	12 19	12 63	1,139 25
	Advertising, Books, S. & P.....	22 61	606 12	628 73	12,236 82
	Expense.....	1 33	36 57	37 90	14,941 41
	Light, Oil, Lamps, Wicks, Etc.....	<i>k</i> 05	1 51	1 56	1 56
	Postage.....	19 88	547 33	567 21	8,062 48
	Salaries.....	7,949 13	.....	7,949 13	213,883 37
	City of Erie, Board of Com. of the Sinking Fund.....	.....	2,000 00	2,000 00	170,500 00
	City of Erie.....	.....	.....	.....	19 23
	Court Costs.....	42	11 60	12 02	490 42
	Counsel Fees.....	103 63	.....	103 63	4,380 49
Legal.	Damages.....	<i>j</i>.....	.....	.....	395 63
	Expense.....	.....	.....	.....	189 02
Total.....		\$ 51,220 84	\$ 67,989 76	\$119,210 60	\$ 2,919,793 74

a Accounts opened in 1891. *b* Account's opened in 1892. *c* Accounts opened in 1893. *d* Accounts opened in 1894.
e Accounts opened in 1895. *g* Accounts opened in 1897. *h* Accounts opened in 1898. *i* Accounts opened in 1899.
j Accounts opened in 1900. *k* Accounts opened in 1901.

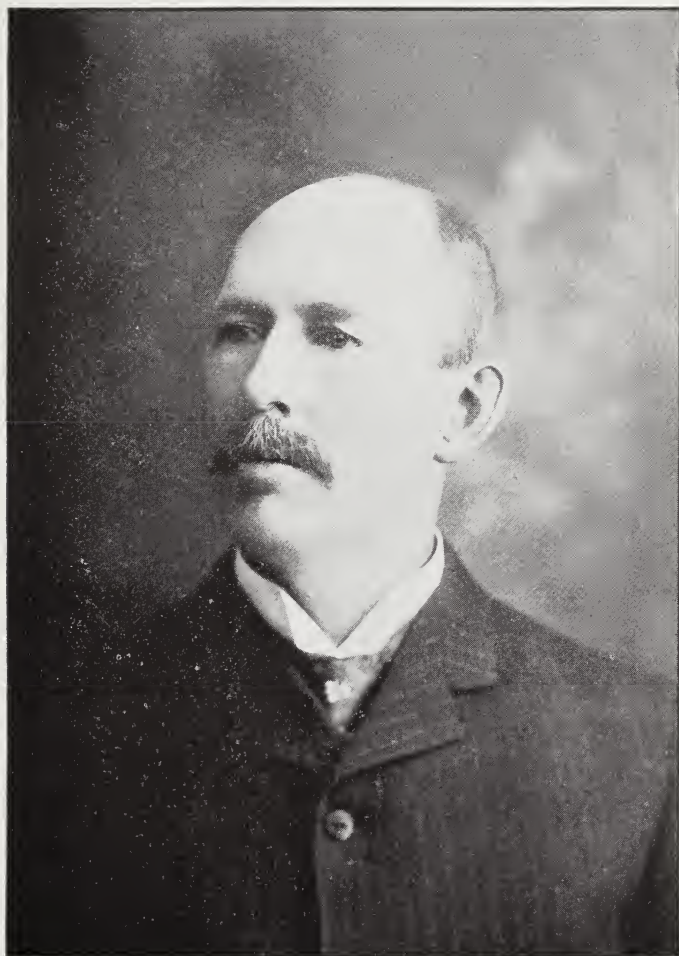
RECAPITULATION.

DEPARTMENT.	FOR THE YEAR 1901.				From Beginning of Works to December 31, 1901.
	Pro-Rata.	Labor.	Material.	Total.	
Construction.....	.4563708 +	\$ 17,944 70	\$ 36,386 89	\$ 54,404 24	\$ 1,821,098 53
Maintenance.....	.2061973 +	9,078 58	15,502 33	24,580 91	223,278 68
Operating.....	.2426400 +	16,027 86	12,897 41	28,925 27	450,316 10
Accounting.....	.0770445 +	7,993 00	1,191 53	9,184 53	249,125 64
Sundries.....	.0167770 +	.....	2,000 00	2,000 00	170,519 23
Legal.....	.0069701 +	104 05	11 60	115 65	5,455 56
Totals.....	.9999997 +	\$ 51,148 10	\$ 67,989 76	\$ 119,210 60	\$ 2,919,793 74

Amount of Coal Consumed in Pumping, Gallons of Water Pumped, Average Height Pumped, Cost per Million Gallons, Etc., from First Year Works Were Operated to December 31, 1901.

YEAR.	Tons Coal Consumed.	Cost Coal to Jan. 1 to Dec. 31.	Grades of Bituminous Coal.	Gallons of Water Pumped.	Increase or Decrease.	Number of places supplied.	No. of Fire Hydrants.	Average height of Water in Reservoir above surface of Bay.	Cost Coal per million gallons raised to Reservoir.	Gallons raised by one pound of Coal.
1868.....	591 1	\$ 309 61	Lump.	246,648,960	.....	1,218	97	232 0	.....	.....
1869.....	544 4	4,818 48	"	279,368,495	32,719,535 i	1,727	99	232 0	\$18 76	98 5
1870.....	1,064 5	5,159 10	"	395,076,000	115,707,505 i	2,140	103	232 0	16 52	150 9
1871.....	1,422 7	7,117 00	"	384,062,415	11,013,585 d	2,475	107	232 0	21 90	114 8
1872.....	1,308 5	6,528 50	"	444,817,395	60,754,980 i	2,663	107	232 0	17 38	126 4
1873.....	1,672 5	8,412 65	"	531 005,475	86,188,080 i	2,700	110	232 0	16 30	145 5
1874.....	1,759 0	7,709 54	"	670,726,650	139,721,175 i	2,763	112	232 0	13 30	159 3
1875.....	1,836 4	8,657 61	"	660,981,810	9,744,840 d	2,854	114	232 0	12 75	135 7
1876.....	1,105 1	8,925 22	"	682,392,315	21,410,505 i	2,915	115	232 0	11 64	136 4
1877.....	2,456 6	8,509 33	"	807,800,400	125,408,085 i	3,011	121	232 0	9 19	153 6
1878.....	2,463 3	7,945 37	"	775,805,250	31,995,150 d	3,568	126	232 0	8 99	126 0
1879.....	2,628 1	7,428 92	"	975,640,934	219,835,684 i	4,110	161	232 0	6 68	142 2
1880.....	3,076 1	6,978 41	Slack.	829,759,260	145,881,674 d	4,687	171	234 0	6 45	139 7
1881.....	3,430 3	6,517 58	"	815,939,685	13,819,575 d	5,077	197	234 7	4 66	170 0
1882.....	2,968 2	5,355 93	"	1,036,496,665	101,841,665 i	5,395	248	234 3	4 99	152 4
1883.....	2,398 2	3,908 59	"	1,117,389,075	118,715,315 i	5,658	270	232 9	4 40	159 7
1884.....	3,010 8	4,502 61	"	1,082,892,075	80,892,410 i	6,140	280	233 3	3 86	165 8
1885.....	3,243 8	4,575 79	"	1,218,213,688	100,824,613 i	6,368	318	234 1	2 95	216 0
1886.....	3,369 0	4,318 64	"	1,341,708,002	123,494,314 i	6,600	333	234 6	1 80	192 1
1887.....	2,820 4	3,589 31	"	1,475,358,220	133,650,218 i	7,086	346	235 2	1 81	301 5
1888.....	2,392 3	2,545 46	"	1,659,625,551	184,267,331 i	7,728	372	236 9	2 18	322 4
1889.....	2,446 0	2,661 12	"	1,807,038,580	147,413,029 i	8,255	393	237 3	2 35	279 43
1890.....	2,583 6	3,052 89	"	2,047,993,505	240,954,925 i	8,998	415	237 4	2 66	248 6
1891.....	3,120 7	3,941 53	"	2,333,638,610	285,645,105 i	9,687	444	236 5	2 43	306 8
1892.....	3,658 0	4,807 11	"	1,816,596,518	517,042,092 d	10,680	479	236 6	2 21	278 62
1893.....	4,693 5	6,218 95	"	1,975,396,305	158,797,787 i	.....	489	237 2	2 21	278 62
1894.....	2,960 0	4,423 59	"	2,005,757,728	30,361,423 i	10,846	514	237 6	1 796	328 17
1895.....	3,541 5	4,377 16	"	2,215,416,770	209,059,042 i	11,385	523	235 9	2 034	331 75
1896.....	3,056 0	3,603 28	"	2,270,520,528	55,103,758 i	11,739	543	235 6	1 68	363 98
1897.....	3,338 2	4,507 52	Miscel's.	2,722,322,604	451,802,076 i	11,932	565	235 48	*1 701	356 408
1898.....	3,819 0	3,815 68	Slack.	3,124,440,644	402,118,040 i	12,451	595	235 46	2 318	315 887
1899.....	3,819 1	4,633 06	"	3,190,024,916	65,584,272 i	12,949	632	236 04	2 005	398 878
1900.....	5,285 9	7,754 34	"	.....	.....	.....	.....	.....	.....	.....
1901.....	5,199 75	8,103 99	"	.....	.....	.....	.....	.....	.....	.....

*HIGH SERVICE SYSTEM comprises all the territory south of Nineteenth street. In this district the average lift in feet for 1901 was 290.88. See Pumping Statistics.



WILLIS B. DURLIN.
COMMISSIONER SINCE 1901.

1901.

BALANCE SHEET.
ASSESSED ACCOUNTS.

1901.

Ward.	Balance from Dec. 31, 1900.	Assessm'ts.	Additions.	Penalties.	Balance to Jan. 1, 1902.	Totals.	Balance from Dec. 31, 1900.	Deductions.	Cash.	Balance to Jan. 1, 1902.
1	\$ 56 29	\$ 14,968 49	\$ 764 92	\$ 77 42	\$ 26 77	\$ 15,893 89	\$ 79 87	\$1,737 09	\$ 14,023 93	\$ 53 00
2	62 16	21,755 73	986 53	71 20	49 30	22,924 92	28 23	777 32	22,017 93	101 44
3	77 82	24,520 21	984 18	84 78	71 46	25,738 45	33 04	1,119 64	24,457 75	128 02
4	59 17	20,322 50	929 73	81 58	58 06	21,451 04	73 34	1,836 95	19,457 96	82 79
5	70 39	10,334 62	685 88	45 46	26 14	11,162 49	24 69	589 71	10,475 34	72 75
6	35 27	11,795 36	591 91	49 68	19 02	12,491 24	14 01	508 56	11,887 83	80 84
7	3 47	1,036 94	158 28	6 84	7 54	1,213 07	1 55	151 09	1,017 58	42 85
Total..	364 57	\$104,733 85	\$5,101 43	\$416 96	\$258 29	\$110,875 10	\$254 73	\$6,720 36	\$103,338 32	\$561 69

METER ACCOUNTS.

1	\$ 661 51	\$ 3,522 30	\$ 2 35	\$ 9 59	.....	\$ 4,195 75	.....	\$ 43 30	\$ 3,311 02	\$ 841 43
2	2,934 74	14,969 02	9 02	23 63	82	17,937 23	1 20	28 86	13,760 61	4,146 56
3	1,534 82	6,338 32	37 89	37 48	.....	7,948 51	1 34	9 06	6,336 17	1,601 94
4	403 56	2,005 28	39	20 75	.....	2,429 98	.....	19 09	1,940 54	470 35
5	647 13	2,651 35	30 94	2 93	.....	3,332 35	.....	.....	2,857 20	475 15
6	164 66	802 91	12 06	89	.....	980 52	.....	25 83	825 75	128 94
7	186 57	714 71	31 38	7 18	.....	939 84	.....	.....	728 15	211 69
Total..	\$6,532 99	\$31,003 89	\$124 03	\$102 45	82	\$37,764 18	\$2 54	\$126 14	\$29,759 44	\$7,876 06

SPECIAL PERMITS.

1	.....	\$ 10 00	.....	.....	.....	\$ 10 00	.....	.....	\$ 10 00	.....
2	.....	12 89	.....	.....	.....	12 89	.....	.....	12 89	.....
3	.....	34 28	.....	.....	.....	34 28	.....	.....	34 28	.....
4	.....	34 25	.....	.....	.....	34 25	.....	.....	34 25	.....
5	.....	16 34	.....	.....	.....	16 34	.....	.....	16 34	.....
6	.....	6 00	.....	.....	.....	6 00	.....	.....	6 00	.....
7	.....	19 17	.....	.....	.....	19 17	.....	.....	19 17	.....
Total..	.....	\$132 93	.....	.....	.....	\$ 132 93	.....	.....	\$132 93	.....

BUILDING ACCOUNTS.

1	.....	\$	97 96	.....	\$	97 96	.....	\$	97 96	.....
2	.....		119 94	.....		119 94	.....		119 94	.....
3	.....		120 88	.....		120 88	.....		120 88	.....
4	.....		73 62	.....		73 62	.....		73 62	.....
5	.....		168 63	.....		168 63	.....		168 63	.....
6	.....		51 77	.....		51 77	.....		51 77	.....
7	.....		16 38	.....		16 38	.....		16 38	.....
Total..	.....	\$	649 18	.....	\$	649 18	.....			.....
Water..	\$6,897 56		\$5,225 46	\$259 11	\$519 41	\$257 27	\$6,846 50	\$133,879 87	\$8,437 75	

PLUMBING ACCOUNTS.

1	\$50 55	\$	290 07	.....	.....	.....	.....	\$	295 30	45 32
2	.....		1,738 01	.....	.....	.....	.....		988 57	749 44
3	17 00		719 95	.....	.....	.....	75		178 29	557 91
4	.....		10 00	.....	.....	.....	.....		10 00	.....
5	.....		75	.....	.....	.....	.....		75	.....
6	6 09		2 00	.....	.....	.....	.....		5 94	2 15
7	.....		36 85	.....	.....	.....	.....		30 85	6 00
Total..	\$73 64	\$2,797 63	.....	.....	.....	.....	.....	\$1,509 70	\$1,360 82	
GrandTotal	\$6,971 20	\$139,317 48	\$5,225 46	\$259 11	\$519 41	\$257 27	\$6,847 25	\$135,389 57	\$9,798 57	

1901. Statement of Account with the City of Erie, Penna. 1901.

CITY OF ERIE, PENNA.—DR.

CASH—Paid Board of Commissioners of the Sinking Fund of the City of Erie.....

INTEREST—On balances in Second National Bank, from October 1, 1900, to April 1, 1901.....

Interest on same to December 31, 1901.....

From April 1, 1901, to October 1, 1901.....

Interest on same to December 31, 1901.....

On payment to Board of Commissioners of the Sinking Fund of the City of Erie, Jan 12, 1901, on.....

WATER—City Hall.....

Engine Houses.....

Fire Hydrants.....

Flushing Sewers.....

Settling filling in Sewer Trench.....

Fountains—Drinking.....

Fountains—Park.....

Parks—Central—East.....

Parks—Central—West.....

Parks—Lakeside—East.....

Parks—Lakeside—West.....

Sprinkling State street, bet. Front and Dock.....

Sprinkling Streets by Supt. of Streets.....

Balance.....

\$ 2,000 00

\$ 94 53

2 36 \$

185 37

2 32

187 69 \$

284 58

2,000 00

77 37

361 95

266 02

230 35

34,760 00

251 75

130 00

176 90

1,251 05

1,427 95

50 00

50 00

17 90

72 00

89 90

140 80

7 29

148 09

37,404 06 \$

39,766 01

567,113 73

\$606,879 74

CREDITS.

BALANCE—December 31, 1900.....

INTEREST—On same to December 31, 1900.....

RENT—Of Offices one year.....

583,915 94

21,763 80

1,200 00

606,879 74

\$567,113 73

\$567,113 73

Balance due the City of Erie, Penna., December 31, 1901.....

RESOURCES:—PLANT NORTH OF FRONT STREET.—

Buildings and Grounds including Piers to Intake No. 1.....	\$ 114,432 24	
Boiler House from January 1, 1896.....	17,176 97	
Engine House No. 3 from January 1, 1892.....	21,591 35	\$ 153,200 53
Boilers from January 1, 1896.....	18,881 54	
Engines and Boilers to December 31, 1891.....	107,309 35	
Engine No. 4 from January 1, 1892.....	49,147 09	
Engine No. 5 from January 1, 1898.....	34,031 72	209,369 70
Electric Light Plant.....		5,711 28
Engine Room Furniture and Fixtures.....		2,067 27
Tools—Coal Elevator and Conveyor from January 1, 1900.....		1,947 34
Including Machine Shop from January 1, 1901.....		2,448 59
Meter Prover from January 1, 1900.....		500 21
Intake Pipes—No. 1.....	55,568 44	
No. 2 from January 1, 1892.....	143,826 35	199,394 79
Railroad Switch and Scales.....		3,262 09
Steel Plate Chimney No. 1 from January 1, 1896.....		4,245 44
Water Lots from January 1, 1895.....		16,151 00
		\$ 598,298 27

PLANT SOUTH OF FRONT STREET—

Connections.....	143,571 99	
Drinking Fountains from January 1, 1894.....	1,899 62	
Fire Hydrants.....	34,840 85	
High Service System from January 1, 1898.....	50,143 68	
Mains.....	\$ 682,472 43	
Main—30 inch.....	83,289 35	
Meters.....	765,761 78	
Stop Valves.....	25,509 43	
Office Furniture and Fixtures.....	47,479 49	1,069,206 84
Reservoir.....		2,816 52
		137,629 35
		1,209,652 71
		1,807,950 98

PERSONAL—Accounts—Assessed.

Accounts—Meter.....	561 69
Accounts—Plumbing.....	7,886 53

CASH—In hands of Treasurer, City of Erie.....

LIABILITIES:—ACCOUNTS—City of Erie, Penna.

Credits on Assessed.....	258 29	
Credits on Meter.....	11 29	
Balance.....	269 58	567,383 31
		1,266,938 44
		1,834,321 75



NEW BOILER HOUSE AND SELF-SUSTAINING STEEL PLATE
CHIMNEY.

RATES FOR CITY WATER.

Approved by Select Council, August 19, 1895.—Approved by Common
Council, September 16, 1895.—Approved by the
Mayor, September 21, 1895.

AND AS AMENDED AND APPROVED NOVEMBER 25, 1899.

Are All Annual Except as Otherwise Indicated, and Payable Quarterly in
Advance, as Follows :

Frist Quarter—January, February, March—January 1st.

Second Quarter—April, May, June—April 1st.

Third Quarter—July, August, September—July 1st.

Fourth Quarter—October, November, December—October 1st.

If the rents for any quarter are not paid within the *first month thereof, five per cent.* may be added. If payment is not made by the 15th day of February, May, August and November of each quarter, the water may be turned off from the premises, and shall not be turned on again without the consent of the Commissioners of Water Works, until all back rents and penalties are paid, and the further sum of one (\$1.00) dollar.

Acetylene Gas Machines, for each 50 light machine or less....	\$	2 00
Air Pump.....		3 00
Automobile		2 00
Bath Tub—Private (one family) first tub.....		3 00
Bath Tub—Private (one family) each additional tub.....		1 50
Bath Tub—Public, each tub.....		5 00
Bakery, per barrel of flour used (but no charge less than \$5).....		01
Barber Shop, first chair, including hand basin.....		4 00
Barber Shop, each additional chair, including hand basin.....		2 00
Billiard Tables, each.....		1 00
<i>Billiard Tables when floor is carpeted, one-half the above rate.</i>		
Blacksmith Fire, first fire.....		5 00
Blacksmith Fire, each additional fire.....		2 50
Boarding House, (in addition to family rates) per room.....		1 00
Building Purposes, per bushel of lime; to be paid for before work is begun.....		02
Butcher Stalls.....	3 00 to 15	00
Charitable Institutions, one-third annual rates.....		
Cow.....		75
Condensing Boiler for Steam Heating, (per season of 6 months) per horse power.....		25
Eating Houses	5 00 to 25	00
Family		4 00
Fire Protection Fixtures, testing same, thirty (30) minutes or less.....		3 00
Fire Protection Fixtures, testing same, one (1) hour or less, but more than thirty (30) minutes.....		5 00
Flushing Sewers, settling earth in ditches or purposes of like nature, per hour, or fractional part of an hour, each.....		5 00
Gas Engines, five horse power or less.....		5 00
Gas Engines, for each additional horse power.....		1 00
<i>Gas Engines, when water is used over and over again, from tank prepared for the purpose, one-half the above rates.</i>		

Hand Basins in dwellings, hotels and schools, first basin.....	\$	1 00
Hand Basins in dwellings, hotels and schools, each additional basin.....		50
Hand basins in offices, stores and blocks, each.....		1 00
Hotels, (in addition to family rates) per room.....		1 00
Laundry, shop.....		5 00
Laundry, wash tub, stationary, each.....		2 00
Laundry, revolving washer, each.....		5 00
Livery Stable, per horse		2 00
Offices.....	3 00 to	10 00
Private Stable, one or two horses		2 00
Private Stable, each additional horse over two.....		1 00
Printing Offices.....	5 00 to	30 00
Public Halls.....	5 00 to	25 00
Saloons.....	5 00 to	25 00
School, per pupil (in addition to fixtures).....		10
Slaughter Houses.....	5 00 to	50 00
Sleeping Rooms, each.....		1 00
Sprinkling Streets or Lawns with Hose, per Season :		
Corner lot, 41 feet front or less.....		5 00
Inside lot, 41 feet front or less.....		3 00
For each additional foot front to either corner or inside lot.....		05
Steam Engines, 10 hours per day, each Horse Power.....		2 50
Stores	3 00 to	15 00
Urinal, private, self-closing, (one family).....		2 00
Urinal, private, not self-closing (one family).....		6 00
Urinal, public, self-closing.....		3 00
Urinal, public, not self-closing.....		10 00
Urinal, private or public, continuous flow	10 00 to	30 00
Wash Tub, Stationary, first tub (one family).....		2 00
Wash Tub, Stationary, each additional tub, (one family).....		1 00
Water Closet, pan or tank, (one family) private.....		3 00
Water Closet, pan or tank, (one family) each additional water closet		1 50
Water Closet, pan or tank, public, each.....		5 00
Water Closet, hopper, (one family) private, for each water closet.....		6 00
Water Closet, hopper, public, for each water closet.....		10 00
Work Shop, ordinary use.....	3 00 to	5 00

Sprinkling for any purpose will ONLY be allowed on premises where water is taken and paid for, for domestic or other inside use. The sprinkling season is from May 1st to November 1st, in each year.

There is no fractional part of a sprinkling season.

It will cost as much to sprinkle but once at any time during the sprinkling season as it will to sprinkle each day, at the prescribed hours, during the entire season.

Sprinkling must be confined to the hours between 5 and 8 A. M., 12 and 1 P. M. and 5 and 8 P. M., nor during said intervals more than one hour at a time. Persons who exceed one hour may be charged at fountain rates or held liable for violation of the rules, at the option of the Commissioners.

The inside diameter of hose used for sprinkling purposes must not be more than three-quarters of an inch, and the inside diameter of the orifice to the nozzle of the same must not be more than one-quarter of an inch. The use of leaky or defective hose is prohibited.

No person will be allowed to sprinkle adjoining or opposite premises, nor to use the water from any hose attachment, or through any hose for any purpose not authorized by the Commissioners. All sprinkling devices

not held in the hand when used shall be classed as fountains, or fountain jets, and assessed accordingly, *but not less than double sprinkling rates.*

Fountains, fountain jets, etc., will be assessed according to the inside diameter of its principal part or parts, and for a continuous flow during the entire sprinkling season.

Hose must not be used for cleaning streets or street gutters, for washing away collections of leaves, heaps of dirt or offal, or flooding streets.

Sprinkling fixtures, to which hose can be attached, no matter where located on any premises, makes said premises assessable for sprinkling.

All plumbing from the curb line inward must be done by a licensed plumber.

Water fixtures will be assessed for each and every purpose available, and for each family or establishment within the enclosure or separated only by a door, gateway or other means of easy communication.

No abatement of charges shall be allowed for vacancy of premises *except from the date that notice has been given at the office of the Commissioners of Water Works that they are unoccupied.*

The Commissioners may limit or stop the supply of water in cases of emergency, and shut it off for repairs or extensions, they being the judges of the time and necessity. Neither the Commissioners nor the City of Erie shall be liable in damages for any insufficient supply of City water.

For each and every violation of the rules and regulations of the Water Works, the offending party will be subject to a fine of not less than five nor more than fifty dollars.

METER RATES.

Twenty (20) cents for each one thousand (1,000) gallons for the first Twenty-five Thousand (25,000) gallons, and Four (4) cents for each one Thousand (1,000) gallons consumed thereafter during each current quarter.

PROVIDED, The minimum receipts from each meter shall be as follows:

$\frac{3}{4}$ inch or less.....	\$ 3 75	1 inch.....	\$ 4 50
1 $\frac{1}{2}$ inch.....	6 25	2 inch.....	10 00
3 inch.....	18 75	4 inch.....	38 75
6 inch.....	\$100 00		

TERMS: All water sold by Meter Measurement must be paid for on or before THE TENTH DAY OF THE FIRST MONTH OF EACH QUARTER. All Meter accounts remaining unpaid at the close of business on the 10th day of said month, shall have Five Per Centum added thereto. On the 15th day of said month, WATER MAY BE TURNED OFF from the property whose meter account is unpaid, and will not be again turned on until all arrearages and penalties are paid, and the further sum of One (\$1.00) Dollar.

1901.

STATEMENT OF WORK DONE BY INSPECTOR No. 1.

1901.

MONTHS.	TURNED OFF ACCOUNT.			TURNED ON ACCOUNT.			NEW HOUSES.			FIXTURES.				TOTALS.
	Unpaid.	Vacancies.	Leaks and Waste.	Paid.	Occupied.	Building Purposes.	Completed.	Complaints.	Frozen.	Installed.	Removed.	Leaks and Waste.	Vacancies.	
January.....	2	2	2	.....	25	2	15	2	1	81	35	3	.....	170
February.....	1	1	.....	.....	20	3	7	4	7	120	31	4	311	509
March.....	.....	4	1	.....	23	12	11	5	6	135	18	5	253	463
April.....	.....	2	.....	3	45	1	57	3	.....	164	40	2	.....	323
May.....	.....	3	.....	.....	42	18	58	4	.....	245	45	4	352	771
June.....	.....	4	.....	.....	25	8	50	4	.....	260	15	3	417	786
July.....	.....	4	.....	.....	26	10	38	3	.....	232	25	5	105	446
August.....	.....	2	.....	.....	20	11	31	3	.....	160	20	3	590	840
September.....	.....	1	.....	.....	17	7	30	3	.....	130	21	3	211	423
October.....	.....	3	.....	.....	18	12	46	5	.....	120	16	5	.....	225
November.....	1	2	.....	.....	15	14	17	3	.....	185	8	4	629	878
December.....	.....	.....	.....	.....	8	5	18	5	4	126	49	6	145	366
Total.....	4	26	3	3	284	99	378	44	18	1958	323	47	3013	6200

1901. STATEMENT OF WORK DONE BY INSPECTOR No. 2. 1901.

MONTHS.	TURNED OFF ACCOUNT.			TURNED ON ACCOUNT.		NEW HOUSES.		FIXTURES.						TOTAL.
	Unpaid.	Vacancies.	Leaks and Waste.	Paid.	Occupied.	Building Purposes.	Completed.	Complaint.	Frozen.	Installed.	Removed.	Leaks and Waste.	Vacancies.	
January										16				17
February						1								
March														
April					3	1				1				5
May	1			1			1			20				23
June								14						14
July														
August										18				18
September														
October														
November										26				26
December				1						23				24
Total.	1			2	3	2	1	14		104				127

STATEMENT OF WORK DONE BY INSPECTOR No. 3. 1901.

MONTHS.	TURNED OFF ACCOUNT.			TURNED ON ACCOUNT.		NEW HOUSES.				FIXTURES.				TOTALS.
	Unpaid.	Vacancies.	Leaks and Waste.	Paid.	Occupied.	Building Purposes.	Completed.	Complaint.	Frozen.	Installed.	Removed.	Leaks and Waste.	Vacancies.	
January					1					7	1		1	10
February										2				2
March														
April										29				29
May										2				2
June														
July										21				21
August														
September														
October										25				25
November														
December														
Total.....					1					86	1		1	89

1901. Statement of Work Done at Annual Inspection by Inspector No. 2 1901.

WARD.	Air Pumps	ENGINES.		FIXTURES.			Hand Basins.	Heating Boilers.	Premises.	SPRINKLERS.				TUBS.		Urinals	WATER CLOSETS.		TOTAL.
		Gas.	Steam.	Draw Cocks.	Goose Necks.	Hydrants.				Curb.	Hydrant.	Lawn.	Sill Cock.	Bath.	Wash.				
Third.....	23	5	10	2,808	3	202	1,087	53	2,037	125	49	120	907	860	299	77	14	1,998	10,677
Fourth.....	11	5	7	2,142	15	284	850	44	1,749	169	85	91	722	691	304	72	12	1,356	8,609
Sixth.....	7	4	3	1,754	6	166	222	8	1,421	26	49	66	598	243	50	25	.....	555	5,203
Seventh.....	.....	.....	.....	31	.....	7	4	1	39	3	1	4	15	4	.....	.....	.....	4	113
Total.....	41	14	20	6,735	24	659	2,163	106	5,246	323	184	281	2,242	1798	653	174	26	3,913	24,602

1901. Statement of Work Done at Annual Inspection by Inspector No. 3. 1901.

First.....	10	3	4	1,727	7	152	430	23	73	38	63	531	403	100	41	7	909	7	909	6,071
Second.....	27	8	12	2,992	12	295	531	29	55	55	90	660	416	47	75	28	1,329	28	1,329	9,012
Fifth.....	9	1	3	1,619	2	98	145	28	19	35	101	594	209	12	17	1	444	1	444	4,686
Seventh.....	.....	.....	1	80	.....	1	10	6	.....	3	10	35	8	2	.....	.....	16	.....	16	254
Total.....	46	12	20	6,418	21	546	1,116	86	147	131	264	1,820	1036	161	133	36	2,698	36	2,698	20,023

PUMPING STATISTICS FOR 1901.

ENGINES.

MONTHS.	No. 3. GASKILL, 5,000,000 Gallons.				No. 4. WORTHINGTON, 12,000,000 Gallons.				No. 5. WORTHINGTON, 8,000,000 Gallons.			
	SERVICE.				SERVICE.				SERVICE.			
	HIGH.		LOW.		LOW.		HIGH.		LOW.		TOTAL.	
	Days.	Gallons.	Days.	Gallons.	Days.	Gallons.	Days.	Gallons.	Days.	Gallons.	Days.	Gallons.
January	9	21,974,498	9	21,974,498	31	199,294,080	23	41,465,160	23	186,490,656	23	41,465,160
February	28	92,517,516	28	92,517,516	28	163,237,992	21	33,380,952	28	214,583,296	28	186,490,656
March	31	84,935,760	31	84,935,760	26	198,549,984	31	41,951,184	31	28,048,416	31	214,583,296
April	8	9,673,654	8	9,673,654	30	214,866,552	30	43,349,064	5	28,048,416	26	61,429,368
May	31	84,935,760	31	84,935,760	31	233,485,512	31	103,860,240	31	41,951,184	31	41,951,184
June	31	84,935,760	31	84,935,760	31	182,200,296	31	83,530,128	31	41,951,184	30	43,349,064
July	31	84,935,760	31	84,935,760	31	161,532,864	30	84,099,048	31	41,951,184	31	103,860,240
August	31	84,935,760	31	84,935,760	31	167,907,912	31	83,775,912	31	41,951,184	31	83,530,128
September	31	84,935,760	31	84,935,760	30	169,570,536	30	69,380,520	31	41,951,184	31	84,099,048
October	31	84,935,760	31	84,935,760	31	192,406,224	31	73,956,960	31	41,951,184	31	83,775,912
November	31	84,935,760	31	84,935,760	31	1,883,051,952	289	658,749,168	64	429,122,368	30	69,380,520
December	31	84,935,760	31	84,935,760	31	192,406,224	31	73,956,960	31	41,951,184	31	73,956,960
Total	68	199,427,774	8	19,673,654	302	1,883,051,952	289	658,749,168	64	429,122,368	353	1,087,871,536
Daily Average	546,377	546,377	53,900	53,900	600,277	600,277	1,804,792	1,804,792	1,175,677	1,175,677	2,980,469	2,980,469

PUMPING STATISTICS FOR 1901—Continued.

MONTHS.	ENGINES.				TOTAL.	DAILY AVERAGE.	AVERAGE LIFT IN FEET.		
	TOTALS.						HIGH.	LOW.	
	SERVICE.								
	LOW.								
	Days Run.	Gallons.	Days Run.	Gallons.					
January	32	63,439,658	31	199,294,080	63	262,733,738	8,475,281	291.48	235.35
February.....	28	92,517,516	28	186,490,656	56	279,008,172	9,964,577	289.77	235.98
March	31	84,935,760	31	214,583,296	62	299,519,056	9,661,905	288.77	235.41
April	21	33,380,952	39	210,960,062	60	244,341,014	8,144,700	275.22	235.67
May	31	41,951,184	31	198,549,984	62	240,501,168	7,758,102	270.89	236.06
June.....	30	43,349,064	30	214,866,552	60	258,215,616	8,607,187	270.79	237.01
July.....	31	103,860,240	31	233,485,512	62	337,345,752	10,882,121	278.32	236.59
August.....	31	83,530,128	31	182,200,296	62	265,730,424	8,571,949	280.61	236.38
September.....	30	84,099,048	30	161,532,864	60	245,631,912	8,187,730	281.71	236.77
October.....	31	83,775,912	31	167,907,912	62	251,683,824	8,118,833	281.78	236.98
November	30	69,380,520	30	169,570,536	60	238,951,056	7,965,035	279.78	237.09
December	31	73,956,960	31	192,406,224	62	266,363,184	8,592,360	281.49	237.14
Total.....	357	858,176,942	374	2,331,847,974	731	3,190,024,916	.....	3,370.61	2,836.43
Daily Average.....	.....	2,351,170	.....	6,388,624	.....	8,739,794	8,739,794	280.88	236.37

DESCRIPTION OF RESERVOIR, STAND PIPE, BOILER HOUSE, ENGINES AND INTAKE PIPES.

Reservoir.

The reservoir was constructed in 1873 and is about two miles distant from the pumping station, the bottom of which is 210 feet from above the zero level of the water in the bay, and when the water is carried to a depth of 27 feet, holds 32,952,934 gallons of water.

Stand Pipe.

The stand pipe was erected in 1868. It is five feet in diameter and 259.65 feet in height. A spiral staircase surrounds it and all enclosed in brick. So far as we know, this is the tallest stand pipe in the world.

Boiler House.

The boiler house was erected in 1897 and is 74 feet wide, 102 feet long, and 25 feet from floor line to bottom of cords to roof. On the north side eight horizontal tubular boilers are installed in batteries of two each. The boilers are 72 inches in diameter, 18 feet long, without domes, and contain 80 4-inch lap welded tubes, capable of carrying 150 lbs. pressure to the square inch.

On the south side of the house can be erected an equal number of the same size boilers, but until these are required the room is used for storing coal; the bins now in place hold 800 tons of coal.

On the north side of the boiler house, near the east end, is a self-sustaining steel plate chimney, 175 feet high, 75 inches internal diameter, lined with fire-brick to a height of 80 feet. The chimney was erected in 1897.

Engines.

There are five pumping engines.

Nos. 1 and 2 are Cornish Bull Pumps, erected in 1868; alike in their dimensions, which are as follows: Steam cylinders, 60 inches in diameter; Pump Plunger, $20\frac{1}{4}$ inches in diameter, each 10-foot stroke, capacity being 165 gallons per stroke, pumping 2,000,000 gallons daily. These pumps are out of commission, the cost for repairs being greater than they are worth.

No. 3 is a Gaskill Horizontal Compound Pumping Engine, erected in 1886, having two H. P. Cylinders, 21 inches in diameter, two L. P. Cylinders, 42 inches in diameter, two pumps $19\frac{1}{2}$ inches in diameter, all 36-inch stroke; capacity being 182 gallons per revolution, pumping 5,000,000 gallons daily.

No. 4 is a Worthington Horizontal Compound High Duty Pumping Engine erected in 1893, having two H. P. Cylinders, 33 inches in diameter, two L. P. Cylinders, 66 inches in diameter, two pumps, 29 inches in diameter, all $49\frac{3}{4}$ -inch stroke; capacity being 552 gallons per stroke, pumping 12,000,000 gallons per day, at a piston speed of 128 feet per minute, against a head of 260 feet.

No. 5 is a Worthington Horizontal Compound High Duty Pumping Engine, erected in 1899, having two H. P. Steam Cylinders, each 25 inches

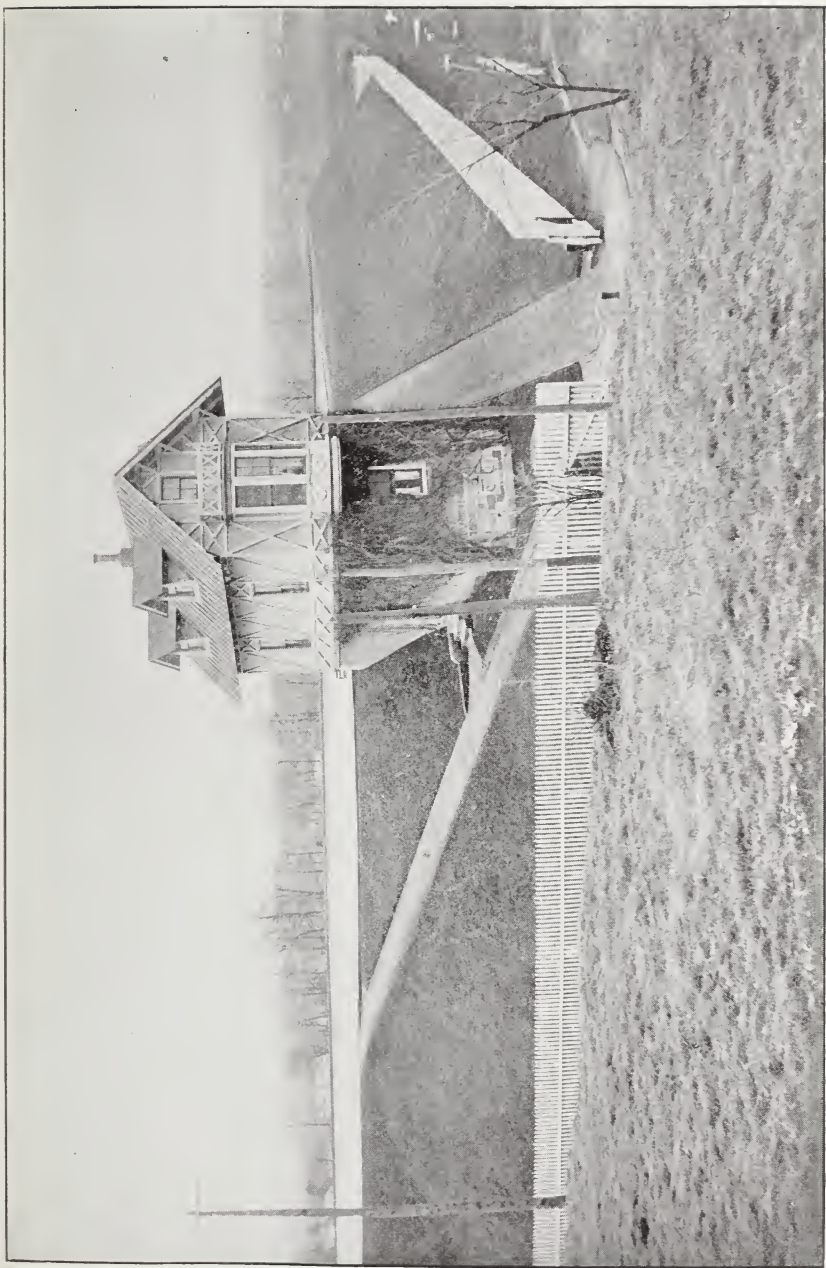
in diameter; two L. P. Cylinders, each 50 inches in diameter, two double acting water plungers, each 23 inches in diameter, all 36-inch stroke; capacity being 264 gallons per stroke, pumping 8,000,000 gallons per day, at a piston speed of 136 feet per minute, against a total load of 142 pounds per square inch (a head of 328 feet).

The regular employees at the pumping works are one chief engineer, one machinist, two assistant engineers, three greasers, three firemen, one assistant fireman, one watchman and keeper of grounds, and one janitor. The chief engineer stands a watch of five hours, from 7 to 12 every forenoon; the assistants divide the remainder of each day equally between them.

Intake Pipes.

There are two intakes, one constructed in 1868, of which 52 feet is brick 14 feet in diameter, 590 feet is wood $4\frac{1}{4}$ feet in diameter, and 333 feet is boiler iron 4 feet in diameter, making a total length of 975 feet. The top of the outer end of this intake is four feet below the zero level of the bay, and as it approaches the shore ascends until the top is only two feet above the zero level of the bay. *This intake has not been used since the new one was completed, and as the part made of wood has not been submerged for some time it is undoubtedly past use.*

The second intake was completed in 1896. It is made of cast iron, 60 inches internal diameter, 8,307.18 feet long, buried in the bottom of the bay; at no place is there less than three feet of earth over its top. The outer end terminates in an octagonal crib, 40 feet being its extreme width, and 8 feet high, the top being 13 feet below the zero level of the bay. So far as we know, this is the longest single piece of submerged 60-inch cast iron pipe in the world.



RESERVOIR.

FIRE HYDRANTS PLACED IN 1901.

STREET.	LOCATION.	SIZE.	STYLE.	REMARKS.
Pumping Station..	{ 76 ⁵ feet East of Engine House No. 1 }	4-inch..	Matthew's..	{ In place of 4-inch Matthew's. 5 feet 6 inches east of Parade.
Fifth	{ 29 ³ feet North of " " 2 }	4-inch..	"	
East Lake Road..	12 feet East of Parade	6-inch..	"	
North Park Row..	5 feet East of Penna. Ave.	6-inch..	"	
North Park Row..	5 feet East of State	6-inch..	"	In place of 4-inch Matthew's. { In place of 6-inch Matthew's. 177 feet East of Cranberry.
Seventh	157 feet West of French.	6-inch..	"	
Tenth	251 feet East of Hess Ave.	6-inch..	"	
Twelfth.....	5 feet East of Cranberry	6-inch..	"	
Fifteenth.....	496 ⁵ feet East of Hess Ave.	6-inch..	"	In place of 4-inch Matthew's. { In place of 6-inch Matthew's. 399 ⁶ feet East of Parade. { In place of 6-inch Matthew's. 150 feet West of Wallace. In place of 4-inch Matthew's. In place of 4-inch Matthew's. In place of 4-inch Matthew's. { 4-inch Matthew's. On property of Fred. Kochler & Co., taken out. In place of 4-inch Bay State.
Sixteenth.....	174 ⁵ feet East of Reed	6-inch..	"	
"	5 feet East of Peach	6-inch..	"	
"	5 feet East of Myrtle	6-inch..	"	
"	10 feet East of Chestnut	6-inch..	"	
"	330 ⁶ feet East of French	6-inch..	"	
"	330 ⁶ feet East of Holland	6-inch..	"	
Eighteenth.....	8 inches East of West Line of Cherry	6-inch..	"	
Nineteenth	5 feet East of Reed	6-inch..	"	
"	482 ³ feet East of Parade	6-inch..	"	
"	5 feet West of Wallace	6-inch..	"	Matthew's
Twenty-first	5 feet East of German	6-inch..	"	
"	5 feet East of French	6-inch..	"	
"	6 ⁶ feet East of State	6-inch..	"	
East Buffalo Road.	1700 feet East of City Line	6-inch..	"	
Twenty-third.....	366 feet West of Plum	6-inch..	"	
Twenty-fifth	72 ⁴ feet West of Holland	6-inch..	"	
"	279 ³ feet East of Wayne	4-inch..	Matthew's	
Twenty-sixth.....	18 ⁶ feet East of Cherry	6-inch..	"	
Twenty-seventh	322 ⁶ feet West of Plum	4-inch..	"	
Wayne	112 feet South of Thirteenth	6-inch..	"	
"	501 feet North of Eighteenth	4-inch..	"	
Ash				

Wallace	5 feet South of Twentieth.....	4-inch..	Matthew's
Parade	5 feet South of Twelfth.....	6-inch..	"
"	5 feet South of Thirteenth.....	6-inch..	"
"	5 feet South of Fifteenth.....	6-inch..	"
German	4 feet North of Twentieth.....	6-inch..	"
"	2 feet South of Third	6-inch..	"
French	72 ⁹ feet North of Sixth	6-inch..	"
State	9 feet South of Fourth	6-inch..	"
"	242 ⁴ feet South of Fourteenth.....	6-inch..	"
"	5 feet South of Third	6-inch..	"
"	9 feet South of Fifth.....	6-inch..	"
Peach	11 feet South of Goodrich.....	6-inch..	"
"	30 ⁹ feet South of Twenty-sixth.....	6-inch..	"
"	5 feet North of Thirteenth.....	6-inch..	"
"	11 feet North of Fourth.....	6-inch..	"
"	5 feet North of Fifth.....	6-inch..	"
"	24 feet South of Sixth	6-inch..	"
"	801 feet South of City Line.....	4-inch..	"
"	20 feet South of Twenty-fifth.....	6-inch..	"
Poplar.....	38 feet South of Fourth.....	6-inch..	"
"	5 feet North of Third.....	4-inch..	"
Liberty	165 feet South of Eleventh.....	6-inch..	"
Plum.....	191 feet North of Second.....	4-inch..	"
Raspberry	180 ⁵ feet South of Twenty-seventh.....	6-inch..	"
Reservoir	313 ⁶ feet South of Twenty-sixth.....	4-inch..	"
Horton.....	334 feet South of Orchard.....	6-inch..	"
Orchard	18 ⁴ feet North of Horton.....	6-inch..	"
"	200 feet North of Eliot.....	6-inch..	"

In place of 4-inch Matthew's,
In place of 4-inch Matthew's,

{ In place of 6-inch Matthew's,
5 feet South of Fifth Street,
In place of 4-inch Bay State,

{ In place of 4-inch Matthew's,
118 feet North of South Park,

{ In place of 4-inch Bay State,
8⁸ feet South of Twenty-fifth,
In place of 6-inch Matthew's,
98 feet South of Fourth,
In place of 4-inch old Bay State,
97 feet North of Third,

N. B.—One 1½-inch Hays Cart Sprinkler Hydrant Set N. W. Corner 7th and Cherry Streets.

SUMMARY OF
FIRE HYDRANTS PLACED AND REMOVED IN 1901.

Placed.			
STYLE.—	SIZE.	NUMBER.	
Matthew's.....	4-inch.	11	
Matthew's.....	6-inch.	<u>45</u>	56
Removed.			
Matthew's.....	4-inch.	10	
Matthew's.....	6-inch.	5	
Bay State.....	4-inch.	<u>4</u>	<u>19</u>
Net Increase.....			37
Number in use December 31, 1900.....			<u>595</u>
Total in use December 31, 1901.....			<u>632</u>

STOP VALVES PLACED IN 1901.

STREET.	WHERE LOCATED.	SIZE.	STYLE.	REMARKS.
Pumping Station.	{ 103 ft. West of Boiler House.	4-inch.	Eddy.	
Second	{ 34 ft. South of North line of Boiler House.	4-inch.	"	4-inch Eddy taken out.
Third.	West line of Liberty.			4-inch Eddy taken out.
"	8 ft. West of Holland.			In place of 4-inch Eddy.
"	72 ft. East of Holland.			
"	East line of German.	6-inch.	Eddy.	
"	{ 18 ft. West of East Line of State.			
"	{ 116 ft. South of Third.			
Fourth	West line of State.	2-inch.	Hays.	
"	West line of Peach.	6-inch.	Eddy.	
Fifth.	2786 ft. East of German.	6-inch.	"	On 20-inch Blow Off.
"	West line of Parade.	20-inch.	"	
"	7 ft. East of Parade.	6-inch.	"	{ In place of 6-inch Eddy on East
East Lake Road.	West line of Penna. Ave.	6-inch.	"	line of Parade.
"	East line of Penna. Ave.	6-inch.	"	
North Park Place.	East line of Peach.	6-inch.	"	6-inch Eddy taken out.
"	{ 129 ft. West of East line of Peach.			
"	{ 29 ft. South of North Park Row.			
"	West line of French.	6-inch.	Eddy.	
"	West line of Peach.	4-inch.	"	In place of 4-inch Ludlow.
Sixth.	East line of French.	6-inch.	"	
South Park Place.	East line of Peach.	6-inch.	"	
"	East line of State.	6-inch.	"	
"	West line of French.	6-inch.	"	
Seventh	East line of Hess Ave.	6-inch.	"	
Ninth	West line of State.	8-inch.	"	In place of 4-inch Eddy.
"	East line of Peach.	8-inch.	"	In place of 4-inch Eddy.
Tenth	West line of Brandes.	6-inch.	"	
"	East line of Penna. Ave.	6-inch.	"	

STOP VALVES PLACED IN 1901—Continued.

STREET.	WHERE LOCATED.	SIZE.	STYLE.	REMARKS.
Eleventh.....	East line of State.....	6-inch.	Eddy.....	
Twelfth.....	East line of Hess Ave.....	6-inch.	“.....	
“.....	146 ft. East of Chestnut.....	12-inch.	“.....	
“.....	{ 96 ft. East of Chestnut.....	6-inch.	“.....	
Sixteenth.....	{ 336 ft. South of North line of Twelfth.			
Nineteenth.....	East line of Myrtle.....	6-inch.	Eddy.....	
“.....	West line of Wallace.....	6-inch.	“.....	
“.....	East line of Ash.....	6-inch.	“.....	
“.....	West line of Reed.....	6-inch.	“.....	
Twentieth.....	East line of Reed.....	6-inch.	“.....	
“.....	West line of Peach.....	4-inch.	“.....	
Twenty-first.....	East line of Sassafraz.....	12-inch.	“.....	
“.....	East line of French.....	12-inch.	“.....	
Buffalo Road.....	West line of German.....	6-inch.	“.....	
Twenty-second.....	West line of Elm.....	6-inch.	“.....	
Twenty-third.....	West line of Parade.....	6-inch.	“.....	
Twenty-fifth.....	West line of Plum.....	6-inch.	“.....	
Twenty-seventh.....	East line of Wayne.....	6-inch.	“.....	
Penna. Ave.....	West line of Plum.....	6-inch.	“.....	
Ash.....	North line of Tenth.....	6-inch.	“.....	
“.....	South line of Sixth.....	6-inch.	“.....	
“.....	South line of Fifteenth.....	6-inch.	“.....	
Wallace.....	North line of Eighteenth.....	6-inch.	“.....	
Cedar.....	North line of Twenty-third.....	6-inch.	“.....	
Parade.....	South line of Eighteenth.....	6-inch.	“.....	
“.....	South line of Seventh.....	6-inch.	“.....	
“.....	North line of Thirteenth.....	4 inch.	“.....	
“.....	South line of Fourteenth.....	4-inch.	“.....	
“.....	South line of Fifteenth.....	4-inch.	“.....	
“.....	South line of Twelfth.....	12-inch.	“.....	
“.....	South line of Thirteenth.....	12-inch.	“.....	

In place of 4-inch Eddy.

{ In place of 1¼-inch Hays.
{ 7 ft. South of Eighteenth Street.

Parade.....	North line of Fourteenth	12-inch.	Eddy.....	
".....	South line of Fifteenth	12-inch.	".....	
German.....	North line of Twenty-first	6-inch.	".....	4-inch Eddy taken out.
".....	South line of Third			4-inch Ludlow taken out.
".....	North line of Fourth			4-inch Ludlow taken out.
".....	South line of Fourth			
".....	South line of Fifth	6-inch.	Eddy.....	
French.....	North line of Third	6-inch.	".....	In place of 4-inch Eddy.
".....	North line of North Park Place	6-inch.	".....	In place of 4-inch Eddy.
".....	North line of Eleventh	6-inch.	".....	
".....	South line of Eleventh	6-inch.	".....	
State.....	North line of Fifth	6-inch.	".....	
".....	South line of Fourth	6-inch.	".....	
".....	South line of Fifth	6-inch.	".....	
Peach.....	North line of Twenty-seventh	6-inch.	".....	
".....	North line of Goodrich	6-inch.	".....	
".....	South line of Twenty-sixth	6-inch.	".....	
".....	South line of Fourteenth	6-inch.	".....	
".....	South line of Third	6-inch.	".....	
".....	North line of Fourth	12-inch.	".....	In place of 4-inch Eddy.
".....	South line of Fourth			
".....	South line of Fifth	12-inch.	Eddy.....	
".....	North line of Seventh	12-inch.	".....	
".....	South line of Seventh	12-inch.	".....	
".....	South line of Seventh			
".....	{ 24 ft. North of South line of Seventh			
".....	{ 21 ft. West of East line of Peach			
".....	402 ft. South of City Line	6-inch.	Eddy.....	
Myrtle.....	North line of Twenty-seventh	6-inch.	".....	
".....	West line of Peach	6-inch.	".....	
Reservoir.....	South line of Twenty-sixth	6-inch.	".....	
Orchard.....	East line of Peach	6-inch.	".....	
".....	South line of Horton	6-inch.	".....	
Horton.....	East line of Orchard	6-inch.	".....	
Scott.....	East line of Myrtle	6-inch.	".....	
				12-inch Ludlow taken out.

STATEMENT OF STOP VALVES.

STYLE.	SIZE IN INCHES.													TOTAL.
	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	4	6	8	12	20	24	30	48	
Bostow .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2
Curtis .....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
Eddy .....	.....	.....	.....	.....	.....	347	612	10	85	10	1	5	2	1072
Jarecki & Hays ..	12	8	1	10	31	.....	.....	.....	.....	.....	.....	.....	.....	62
Ludlow .....	.....	.....	.....	.....	.....	90	50	.....	4	11	.....	.....	.....	155
Pratt & Cady .....	.....	.....	.....	.....	.....	.....	1	4	3	.....	.....	.....	.....	8
Total	12	8	1	10	31	437	655	14	92	22	1	6	2	1301
Eddy .....	.....	.....	.....	.....	.....	7	58	2	11	1	.....	.....	.....	79
Hays .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Total .....	.....	.....	.....	.....	1	7	58	2	11	1	.....	.....	.....	80
Total	12	8	1	10	32	444	723	16	103	23	1	6	2	1381
Eddy .....	.....	.....	.....	.....	.....	12	4	.....	.....	.....	.....	.....	.....	16
Hays .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Ludlow .....	.....	.....	.....	.....	.....	3	.....	.....	1	.....	.....	.....	.....	4
Total .....	.....	.....	1	.....	.....	15	4	.....	1	.....	.....	.....	.....	21
Total	12	8	.....	10	32	429	719	16	102	23	1	6	2	1360

Total Number Stop Valves placed to
December 31, 1900.....Total Number Stop Valves placed
during 1901.....Total Number Stop Valves placed to
December 31, 1901.....Total Number Stop Valves removed
during 1901.....Total Number Stop Valves in use
December 31, 1901.....

MAIN PIPE LAID IN 1901.

STREET.	LOCATION.	SIZES.									REMARKS.	
		$\frac{3}{4}$ in. Ft.	1 in. In.	1½ in. Ft.	2 in. In.	4 in. Ft.	6 in. In.	8 in. Ft.	12 in. In.	20 in. Ft.		
West Front....	At Water Works Pumping Station.....											Hydrant Branch.
Second.....	Pumping Station.....					16 3						In Boiler House.
Third.....	From Liberty to Plum.					194 3						{ In place of 276 ft. of 4 in. taken up.
	Intersection of German.....					424					27 6	
	From main on State eastwardly			89 5	78 5							{ In place of 272 ft. of 6 in. taken out.
Fifth.....	From German to Parade.....										780 6	Hydrant Branch. In
	12 ft. East of Parade.....					12						place of 12 ft. 4 in. H. B. taken out 5 ft. East of Parade.
	278 ft. East of German.....						1 6					Blow Off for 20 in. main.
	From Holland eastwardly.....						330					{ In place of 330 ft. 4 in. taken up.
	Intersection of Peach.....							48				{ In place of 48 ft. 4 in. taken up.
East Lake Road	From 181 ft. East of East Ave. eastwardly.....						1374 6					Hydrant Branch.
N. Park Place..	5 ft. East of Penn'a Ave.....						10					{ In place of 105 ft. 6 in. taken up, being out of line.
	From 70 ft. West of French eastwardly.....						105					{ Hydrant Branch. In place of 6½ ft. 4 in. H. B. taken up.
	157 ft. West of French.....							6 4				Hydrant Branch.
	5 ft. East of State.....							6 4				Hydrant Branch.

MAIN PIPE LAID IN 1901—Continued.

STREET.	LOCATION.	SIZES.								REMARKS.
		¾ in.	1 in.	1½ in.	2 in.	4 in.	6 in.	8 in.	12 in.	
Sixth	From 39 ft. East, west line of Peach northwesterly.....	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	In place of 34 ft. 4 in. taken up in line of main for West 6th st.
S. Park Place ..	From State to French.....						34			{
Park Ave. South	From 143 ft. West of Poplar westwardly.....						393 6			
Seventh	From 929 ft. West of Payne Ave. westwardly.....						48 6			
	251 ft. East of Hess Ave.....		171							
	From Hess Ave eastwardly.....					10				
Eighth	From 4526 ft. East of Payne Ave. eastwardly.....				44 6		272			Hydrant Branch.
Ninth	From Peach to State.....							361		In place of 361 ft. 4 in. taken up.
	Intersection of Peach.....						34 2			{
Tenth.....	From Penn'a to Hess Ave.....						1009			
	From 177 ft. East of Cranberry westwardly.....						173 8			In place of 342 ft. 4 in. taken up.
	5 ft. East of Cranberry.....						6 8			{
							370			Hydrant Branch. In place of 96 ft. 6 in. H. B. taken up, 177 ft. East of Cranberry.
Eleventh	From State to French.....						514 5			{
Twelfth	From Hess Ave. eastwardly 4966 ft. East of Hess Ave.....						10			
	96 ft. East of Chestnut.....						17			Hydrant Branch.
										Blow Off from 12 in. to 20 in. mains.

Fifteenth	From 108 ft. East of Reed eastwardly	66	.....	Hydrant Branch.
	1745 ft. East of Reed	10	.....	Hydrant Branch.
Sixteenth	3306 ft. East of Holland	6	.....	Hydrant Branch.
	3306 ft. East of French	25	.....	{ In place of 348 ft. 4 in. taken up.
	From Myrtle eastwardly	348	.....	{ Hydrant Branch.
	5 ft. East of Myrtle	8	.....	{ Hydrant Branch.
	5 ft. East of Peach	7 5	.....	{ Hydrant Branch.
	10 ft. East of Chestnut	8	.....	{ Hydrant Branch.
Nineteenth	From 3996 ft. East of Parade to Wallace	271 3	.....	{ Hydrant Branch. In place of 9 ft. 6 in. H. B. 3996 taken up.
	5 ft. West of Wallace	9	.....	{ Hydrant Branch.
	5 ft. East of Reed	10	.....	{ Hydrant Branch.
	From line of main on Ash eastwardly	728	.....	{ In place of 45 ft. 4 in. taken up.
Twentieth	From West line of Peach eastwardly	51	.....	{ Hydrant Branch.
Buffalo Road	From 229 ft. East of Brandes eastwardly to city line	100	.....	{ Hydrant Branch.
	From city line eastwardly	1700	.....	{ Extension to Drinking Fountain.
	1700 ft. East of city line	10 6	.....	{ Hydrant Branch. In place of 8 ft. 4 in. H. B. taken up.
	76 ft. West of Camphausen Rd. 16 .....	.....	.....	{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.
Twenty-first	66 ft. East of State	7	.....	{ Hydrant Branch. In place of 8 ft. 4 in. H. B. taken up.
	5 ft. East of French	7	.....	{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.
Twenty-second	5 ft. East of German	6	.....	{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.
	Intersection of Peach	57	.....	{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.
	254 ft. East of German eastw'y	473	.....	{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.

MAIN PIPE LAID IN 1901—Continued.

STREET.	LOCATION.	SIZES.										REMARKS.
		¾ in.	1 in.	1½ in.	2 in.	4 in.	6 in.	8 in.	12 in.	20 in.		
		Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.		
Twenty-second.	Between Cherry and Poplar.											
Twenty-third ..	From Plum eastwardly.						145					
	336 ft. West of Plum.						375					
Twenty-fifth ...	2793 ft. East of Wayne.					9	9				Hydrant Branch.	
	From line of main on Wayne eastwardly.										Hydrant Branch.	
Twenty-sixth ..	186 ft. east of Cherry.						297 3				Hydrant Branch. In place of 710 ft. 4 in. H. B. taken up.	
Twenty-seventh	From main on Plum westw'y.						7 10					
	322½ ft. West of Plum.						361 6					
Twenty-eighth.	From main on Peach westw'y.					9	57				Hydrant Branch. Acc't street paving.	
Penn'a Ave.	From main on 10th northw'y.						394					
Perry.	From 120 ft. South of Seventh northwardly.			9 2								
Wayne	112 ft. South of 13th.						10 2				Hydrant Branch.	
Ash.	501 ft. North of 18th.						5				Hydrant Branch.	
	From main on 15th to 18th.						1139					
	From 6th to 7th.						348					
	From 24 ft. South of 22nd to 23d						267					
Wallace	From 18th to 19th.						289 4				In place of 140 ft. 1½ taken up.	
	5 ft. South of 20th.					10					Hydrant Branch.	
	From 198 ft. North of 21st northwardly.						67					
Parade	5 ft. South of 12th.						12				Hydrant Branch.	
	5 ft. South of 13th.						12				Hydrant Branch.	
	5 ft. South of 15th.						12				Hydrant Branch.	

Parade	From line of main on 12th southwardly				1032	
Cedar	From 125 ft. North of 8th northwardly			244		
German.....	4 ft. North of south line of 20th			8 6		
	From main on 21st to 20th.....			296 6		
	From 3d to 5th.....					780 {
						In place of 642 ft. 4 in. taken up.
	2 ft. South of 3d.....			9		{ Hydrant Branch. In place of 9 ft. 4 in. H. B. taken up.
						{
	72 $\frac{1}{2}$ ft. North of 6th.....			9 6		{ Hydrant Branch. In place of 96 ft. 4 in. H. B. taken up.
French						{
	From North line of 11th southwardly.....			60		{ In place of 60 ft. 4 in. taken up.
						{
	From North Park Place to 6th			197		{ In place of 197 ft. 4 in. taken up.
	242 $\frac{1}{2}$ ft. South of 14th.....			7 9		{ Hydrant Branch.
State						{
	9 ft. South of 4th.....			10		{ Hydrant Branch. In place of 10 ft. 4 in. H. B. taken up.
						{
	9 ft. South of 5th.....			10		{ Hydrant Branch. In place of 10 ft. 4 in. H. B. taken up.
						{
	5 ft. South of 3d.....			10		{ Hydrant Branch. In place of 10 ft. 4 in. H. B. taken up.
						{
Peach.....	From line of main on 3d to 7th				1600	{ In place of 1210 ft. 6 in. and 390 ft. 4 in. taken up.
						{
	341 ft. South of city line southwardly			460		
	11 ft. North of 4th.....			8 5		{ Hydrant Branch.
	5 ft. North of 5th			8 6		{ Hydrant Branch.

MAIN PIPE LAID IN 1901—Continued.

STREET.	LOCATION.	SIZES.										REMARKS.	
		¾ in.	1 in.	1½ in.	2 in.	4 in.	6 in.	8 in.	12 in.	20 in.			
		Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.			
Peach	118 ft. North of south line of Park										{	34 ft. 4 in. Hydrant Branch taken up.	
	30 ft. S. of north line of 6th, 15 ft. E. of west line Peach northwardly												
	35 ft. S. of north line of 6th, 21 ft. W. of east line Peach northeastwardly						6					Hydrant Branch.	
	801 ft. South of city line					10		12				{	In place of 12 ft. 4 in. taken up. For main for W. Park fountain.
	88 ft. South of north line 25th							6				{	Hydrant Branch. In place of 6 ft. 4 in. H. B. taken up.
Myrtle	11 ft. South of Goodrich						10	10				{	Hydrant Branch. In place of 10½ ft. 4 in. H. B. taken up.
	309 ft. South of 26th							40					Hydrant Branch.
	From line of main on 26th southwardly							912				{	In place of 912 ft. 4 in. taken up.
	5 ft. North of 13th						7	9					Hydrant Branch.
	From 528 ft. South of 26th southwardly						174	6					
Poplar	280 ft. South of 27th southw'y						330						
	98 ft. South of 4th northwardly						60						
	38 ft. South of 4th						9					{	Hydrant Branch. In place of 9 ft. 4 in. H. B. taken up, 98 ft. South of 4th.

Poplar	5 ft. North of 3d.....	.....	.....	.....	9 6.....	.....	Hydrant Branch.
Liberty.....	97 ft. North of 3d southwardly From main on 11th southw'y.....	.....	.....	.....	92 204	.....	.....
Plum.....	165 ft. South of 11th..... Between 10th and 11th..... 191 ft. North of 2nd..... From main on 2nd northw'y..... From 5 ft. South of 25th north- wardly.....	.....	.....	.....	3 17 10 212	.....	Hydrant Branch. Hydrant Branch. Hydrant Branch.
Raspberry.....	From 66 ft. South of 27th southwardly.....	.....	.....	.....	84	.....	.....
Goodrich	180 ft. South of 27th..... From line of main on Peach westwardly.....	.....	.....	.....	114 5 9	.....	Hydrant Branch.
Orchard.....	From line of main on Peach Eastwardly.....	.....	.....	.....	51 6	.....	.....
Horton	184 ft. North of Horton..... 200 ft. North of Eliot..... From line of main on Orchard southwardly.....	.....	.....	.....	824 9 9	.....	Hydrant Branch. Hydrant Branch.
Reservoir.....	334 ft. South of Orchard..... From line of main on 26th southwardly..... 313 ³ / ₈ ft. South of 26th.....	.....	.....	.....	334 9 352 6 104	.....	Hydrant Branch.
Total.....	.....	16	188	98 7 122 11	932 5 17436 9	361 2632	1588

N. B.—In addition 490 ft. 6 in. pipe was laid on the property of the Lovell Manufacturing Co.

SUMMARY OF PIPE LAID AND REMOVED IN 1901.

PIPE LAID—

	Feet.	In.
$\frac{3}{4}$ -inch....	16	
1 -inch....	188	
$1\frac{1}{2}$ -inch....	98	7
2 -inch....	122	11
4 -inch....	932	5
6 -inch....	17,436	9
8 -inch....	361	
12 -inch....	2,632	
20 -inch....	1,588	
	Total, 23,375 8	

PIPE REMOVED—

$1\frac{1}{4}$ -inch....	140				
4 -inch....	3,592	2			
6 -inch....	1,605	6			
	Total, 5,337 8				
				Net Total,	18,038
				Or 3 miles.	2,198
				Reported December 31, 1900....	107 miles.
					1,104 5
				Total December 31, 1901....	110 miles.
					3,302 5

CROSSES PLACED IN 1901.

SIZE.	NUMBER.	
6 x 6-inch.....	12	
12 x 6-inch.....	6	
12 x 8-inch.....	1	
12 x 12-inch.....	1	
20 x 6-inch.....	3	
20 x 12-inch.....	2	25

REMOVED IN 1901.

SIZE.	NUMBER.	
4 x 4-inch.....	2	
6 x 4-inch.....	4	
6 x 6-inch.....	5	
12 x 4-inch.....	1	
12 x 12-inch.....	1	13
Net increase.....		12

TEES PLACED IN 1901.

SIZE.	NUMBER.	
4 x 4-inch.....	2	
6 x 4-inch.....	2	
6 x 6-inch.....	34	
12 x 6-inch.....	9	
20 x 6-inch.....	2	49

REMOVED IN 1901.

SIZE.	NUMBER.	
4 x 4-inch.....	2	
6 x 4-inch.....	10	
6 x 6-inch.....	3	5
Net increase.....		34

CONNECTIONS MADE IN 1901.

WARD.	$\frac{3}{4}$ INCH.		1 INCH.		$1\frac{1}{2}$ INCH.		2 INCH.		3 INCH.		4 INCH.		6 INCH.		TOTAL.	
	No.	Feet.	In.	No.	Ft.	In.	No.	Ft.	In.	No.	Ft.	In.	No.	Ft.	In.	No.
First.....	88	1412	1	2	145	6	1	40	6	6	119	6	1	25	98	1742
Second.....	29	644	1	5	150	6	...	3	98	3	98	...	2	18	39	911
Third.....	85	1696	10	4	96	...	1	27	...	4	41	9	...	...	94	1861
Fourth.....	61	1001	3	6	49	8	1	3	6	...	...	...	...	...	68	1054
Fifth.....	157	2512	8	...	...	...	1	8	...	1	11	9	...	...	160	2560
Sixth.....	87	2080	6	2	18	...	...	1	8	1	8	...	...	...	90	2106
Seventh.....	29	467	5	2	10	...	...	1	18	...	1	17	...	...	33	512
Total.....	536	9814	9	21	469	2	4	79	...	16	297	...	3	43	582	10748

CONNECTIONS TAKEN OUT IN 1901.

	$\frac{3}{4}$ INCH.		1 INCH.		$1\frac{1}{2}$ INCH.		2 INCH.		3 INCH.		4 INCH.		6 INCH.		TOTAL.	
	No.	Feet.	In.	No.	Ft.	In.	No.	Ft.	In.	No.	Ft.	In.	No.	Ft.	In.	No.
First.....	11	177	4	...	...	...	1	1	...	...	1	28	...	...	13	206
Second.....	3	74	...	1	7	...	...	...	...	...	...	...	...	...	4	81
Third.....	13	128	4	1	1	6	...	...	...	...	...	...	...	...	14	129
Fourth.....	6	73	1	...	...	...	...	...	...	...	...	...	...	...	6	73
Fifth.....	11	194	8	...	...	...	1	4	...	...	...	...	...	...	12	198
Sixth.....	2	3	1	...	...	...	...	...	...	...	...	...	...	...	2	3
Seventh.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	46	650	6	2	8	6	1	4	...	...	1	28	...	...	51	692
NET INCREASE.....	490	9164	3	19	460	8	3	75	15	296	1	17	3	43	531	10056

CONNECTIONS RENEWED AND ALTERED IN 1901.

Gain in Service Pipe. Loss in Service Pipe.

	Gain in Service Pipe.		Loss in Service Pipe.		Ft. In.		Ft. In.	
	No.	Feet.	In.	No.	Ft.	In.	Ft.	In.
First.....	35	95	11	...	80	6	...	...
Second.....	24	12	6	569	8	...	10056	8
Third.....	123	872	2	115	3	...	13	4
Fourth.....	43	153	5	75	...	...	...	...
Fifth.....	42	100	8	18	2	...	11361	4
Sixth.....	49	959	6	30	11	...	3846	1
Total.....	316	2194	2	889	6	...	45	5

Net increase in service pipe in 1901..... 10056 8

Net increase of service pipe, altering 316 cons. 13 4 8

Net increase of service pipe in 1901..... 11361 4

Service pipe in use Dec. 31, 1900 43 Miles

Service pipe in use Dec. 31, 1901 45 Miles

STATEMENT OF METERS DECEMBER 31, 1901.

KIND.	IN USE.										NOT IN USE.										TOTAL.									
	SIZE IN INCHES.										SIZE IN INCHES.										SIZE IN INCHES.									
	$\frac{5}{8}$	$\frac{3}{4}$	1	1½	2	3	4	6	Total.		$\frac{5}{8}$	$\frac{3}{4}$	1	1½	2	3	4	6	Total.		$\frac{5}{8}$	$\frac{3}{4}$	1	1½	2	3	4	6	Total.	
Crown.....	1	5	2	1	8	1	2	...	20		...	...	...	...	...	...	...	...	...		1	5	2	1	8	1	2	...	20	
Columbia	10	14	...	...	...	...	...	...	24		5	2	...	...	...	...	...	...	7		15	16	...	...	...	...	...	...	31	
Empire	...	...	2	...	3	...	...	...	5		...	...	...	...	...	...	...	...	...		...	...	2	...	3	...	...	...	5	
Gen.....	...	...	...	...	3	...	...	...	3		...	...	...	...	...	...	...	...	...		...	...	...	3	...	...	...	...	3	
Lambert.....	...	1	...	...	...	...	...	...	1		...	...	...	...	...	...	...	...	...		...	...	1	...	...	...	...	...	1	
National	...	...	...	1	...	...	...	...	1		...	...	...	...	...	...	...	...	...		...	...	...	1	...	...	...	...	1	
Pitts. Disc.....	...	1	1	...	...	...	...	...	2		1	...	...	...	...	...	...	...	1		...	...	1	...	...	...	...	...	3	
Thomson.....	2	6	3	4	5	1	4	...	25		1	...	1	...	...	...	...	...	2		3	6	4	4	5	1	4	...	27	
Union.....	3	50	11	13	24	12	15	1	129		3	14	9	3	4	...	1	...	34		6	64	20	16	28	12	16	1	163	
Worthington.....	...	2	6	5	1	1	...	...	15		...	2	3	...	...	...	...	...	5		...	4	9	5	1	1	...	...	20	
Total.....	16	79	25	24	44	15	21	1	225		10	18	13	3	4	...	1	...	49		26	97	38	27	48	15	22	1	274	

ANALYSES OF WATER BY DR. WM. P. MASON, TROY, N. Y.

RENSELAER POLYTECHNIC INSTITUTE.
DEPARTMENT OF ANALYTICAL CHEMISTRY.

RESULTS IN PARTS PER MILLION.

LOCATION.	DATE.	Taste.	Odor.	Color.	Sediment. Quickly Fall- ing.	Turbidity.	Free Ammonia.	Albuminoid Ammonia.	Chlorine.	Nitrogen in Nitrates.	Nitrogen in Nitrates.	Oxygen required to Oxide Organic Matter at 212° F.	Alkalinity. As parts of C.A. C.O. ₂ .	Total Solids.	Bacteria. (Per Cubic Centimetre.)	Bacillus, Coli Communis.	REMARKS.
Lake Erie.....	Feb. 8..	none	none	.08	none	15.	.03	.127	8.	.2	.001	1.2	50.	152.	5627.	present	See letter below.
New Intake.....		none	none	.08	none	6.	.08	.112	8.5.	.2	.004	2.1	50.	135.	1209.	{ few present	
Pittsburgh Dock ..		none	none	.08	none	6.	.081	.134	8.5.	.225	.0045	2.45	51.25	155.	1985.	present	
Reservoir.....		none	none	none	none	1.	.07	.155	8.5.	.2	.0025	2.	50.	143.	410.	none	
Lake Erie.....	April 1..	none	none	.1	none	12.	.037	.075	6.5.	.15	{ minute trace	1.2	42.5	140.	3000.	none	
New Intake.....		none	none	.1	none	6.	.100	.165	8.	.3	.006	2.65	47.5	145.	5500.	present	
Pump Well.....		none	none	.1	none	6.	.105	.147	8.	.3	.003	2.3	47.5	148.	13000.	none	{The count of Bacteria is high.
Reservoir.....		none	none	.05	none	5.	.048	.148	8.	.2	.0005	2.37	48.5	153.	8500.	none	
Horse Shoe Pond..	June 10..	none	none	none	none	none	.066	.278	6.	.075	trace	2.65	55.	165.	.....	none	The jelly flasks for all the waters arrived in bad condition. It ap- peared that they had been shipped before the jelly had hardened. In consequence it is not possible to count the colonies of Bacteria.
Lake Erie.....		none	none	none	none	none	.02	.095	6.	.075	trace	1.	50.	126.	.....	none	
New Intake.....		none	none	none	none	none	.07	.215	6.	.075	.003	1.55	50.	160.	.....	present	
Reservoir.....		none	none	none	none	none	.02	.175	6.	.15	.003	2.25	50.	146.	.....	none	

ANALYSES OF WATER—Continued.

LOCATION.	DATE.	RESULTS IN PARTS PER MILLION.															REMARKS.
		Taste.	Odor.	Color.	Sediment, Quickly fall- ing.	Turbidity.	Free Ammonia.	Albuminoid Ammonia.	Chlorine.	Nitrogen in Nitrates.	Nitrogen in Nitrites.	Oxygen required to oxidize Organic Matter at 212° F.	Alkalinity, As parts of Ca. C.O. 3.	Total Solids.	Bacteria, (Per Cubic Centimetre.)	Bacillus, Coli communis.	
	1901.																
Reservoir.....	Oct. 1...	none	none	trace	none	slight	.0560	.2470	6.	.037	none	2.5	45.	135.	100.	none	{Oscillaria present in con- siderable numbers. This accounts for the rela- tively high "Albuminoid Ammonia" and "Oxygen Required."}
Pump Well.....		none	none	trace	none	slight	.0880	.1460	6.	.043	.001	2.35	50.	167.	240.	none	
Lake Erie.....		none	none	none	none	slight	.0710	.0930	6.	.037	none	.85	50.	134.	70.	none	
New Intake.....		none	none	trace	none	slight	.0540	.1590	6.	.043	.001	2.1	50.	156.	119.	none	

Troy, N. Y., February 16, 1901.

Commissioners of Water Works, Erie, Pa.:

Gentlemen—Permit me to hand you herewith the analytical results for the samples of water taken February 8th. The water of the New Intake is decidedly superior to the Lake Water of that date, both in appearance and in composition. It is free from the fine silt that causes marked turbidity in the Lake Water; it contains a smaller number of Bacteria and fewer Gas-forming organisms. I am still of the opinion that it would be wiser for you to draw your raw water from the present source, rather than attempt the establishment of an intake crib in the lake. I note that the Reservoir sample of February 8th shows great improvement as a result of storage. You will observe the absence of Bacillus Coli Communis, which is a matter of importance. To my mind any future studies you might undertake should be directed toward determining the best possible treatment of your present supply, to the entire exclusion of all consideration of Lake Water. The question to be determined being the extent to which your Reservoir storage can be depended upon for improvement of the raw water, and a consideration of the form of such supplementary purification as might be found to be required.

Yours very truly,

WILLIAM P. MASON.

DRINKING FOUNTAINS FOR MAN, HORSE AND DOG.

Manufactured by J. L. Mott Iron Works, New York and Chicago.

STYLE.	DATE OF INSTALLATION.	WHERE LOCATED.
No. 1.....	October 26, 1894.....	South Park Row between State and French streets.
No. 2.....	June 13, 1894.....	Turnpike, Southwest corner State street.
No. 2.....	June 16, 1894.....	Parade and Southeast corner Tenth street.
No. 2.....	July 3, 1895.....	State and Southeast corner Eighteenth street.
No. 2.....	July 26, 1895.....	Parade, East Side, between Twelfth and Thirteenth streets.
No. 2.....	October 2, 1895.....	State, East Side, between Third and Fourth streets.
No. 2.....	June 16, 1896.....	Chestnut and Southeast corner Eighteenth street.
No. 2.....	July 31, 1897.....	Peach and Southeast corner Twenty-sixth street.
No. 2.....	August 5, 1897.....	Eighth street, Northwest corner Eighteenth street.
No. 2.....	August 14, 1900.....	Peach and Lakeside Park.
No. 3.....	August 22, 1900.....	Water Works Park.
No. 2.....	July 24, 1901.....	Buffalo Road end of main.

STYLE No. 1—Square base; ornamental top, with square sides; three places for man, one for horses.

STYLE No. 2—Square base; oval sides, with plain top; one place for man, one for horses, two for dogs.

STYLE No. 3—Flat base; oval sides, with plain top; one place for man.



EXTRACT FROM THE REPORT OF A. A. KNUDSON, E.E.

Summary and Conclusions.

A complete voltmeter survey between the trolley tracks and piping system of a city such as has been made in Erie, reveals for one thing the character and efficiency of the rails as a return conductor in all parts of a city.

The rails by necessity are in connection with the earth, and the water mains are imbedded in the same streets a few feet away. The earth between the two metals is usually a good conductor of electricity, hence we have the condition of two paths by which the current will flow, and even when tracks are well constructed and the bonding well maintained, current will leave them to some extent and pass through the earth to the water and gas mains, through which it will flow until it reaches favorable conditions for again leaving them and returning to the rails. This return to the rails is usually most marked in the vicinity of the power house but is often found in other parts of a city.

Where the current leaves rails, pipes, or other metals, damage by electrolysis is caused, and not where it enters them.

The results of the survey in Erie show to a marked degree the comparative difference between a good rail return, and a very poor rail return. While even the best constructed and best bonded track will always show more or less passing of current from rails to mains and vice versa. Those tracks that have been neglected and are poor conductors of electricity, show proportionately greater escape and consequent larger opportunity for causing serious damage to the water pipes.

Those lines in the city which show acute indications of escape and consequently poor track return are East Twenty-sixth street, West Twenty-sixth street, West Twelfth street beyond Chestnut street, and East Sixth street. Also of the six railway grade crossings examined, *three* are found to be practically "open," so far as the trolley rails being conductors of electricity are concerned, as follows: Peach street near Union Station, East Sixth street, and East Eleventh street. These are explained in detail.

The tracks of the East Sixth street line when the tests were made were found to be such poor conductors that practically no current would flow through them, the earth and pipes in the street being the only path by which current could pass—a new departure from usual experience. Another practical illustration of this unbonded track is the recent accident near Wallace street where horses were thrown to the ground by their feet coming in contact with the rails each side of defective joints.

At the examination of the 12-inch main near Holland street, and also the 6-inch main on French street on this car route, some electrolytic damage to pipes in both places were found as explained. The 12-inch main in Twenty-sixth street appears to be carrying about all of the return current instead of the rails. The repairs to this track up to about this point are likely to create a positive condition, where the new rails cease and the old rails begin.

West Twenty-sixth Street Line.

This is regarded as the most important of any of the special danger locations in the city for the reason that the largest of the city's water mains is in this street. (See Map "C.") Over these mains are placed the tracks. Current flow from the rails of this road to and through the water mains has been identified as far north as the pumping station. It is regarded as unfortunate that trolley tracks are located at all on this portion of the street between Chestnut and Cherry streets, as owing to the three large mains, the 20-inch, 30-inch and 24-inch, besides a 12-inch, offering a conductivity far